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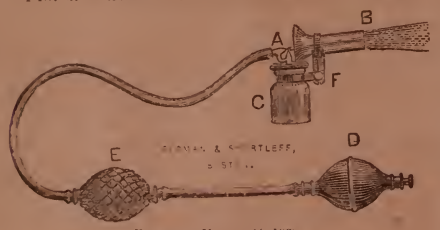

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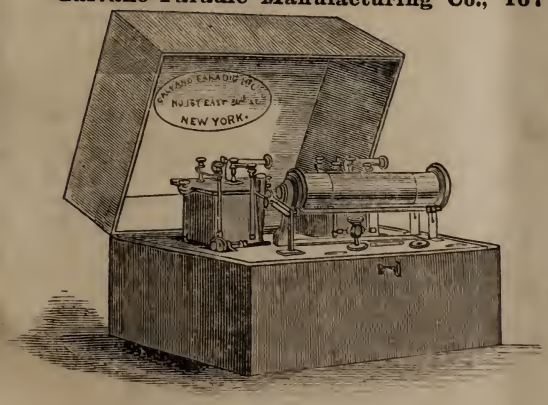

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THE

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A

Semi-Monthly Journal of Medical Sciences.

EDITED BY N. S. DAVIS, M.D., AND F. H. DAVIS, M.D.

No. I. CHICAGO, JAN. 1, 1875. VOL. XVI.

Original Communications.

FISTULA IN ANO: STRICTURE OF THE RECTUM; OPERATION.

BY F. K. BAILEY, M.D., KNOXVILLE, TENN.

W. H. E——; a stoutly-built man, about thirty. Bilious-nervous temperament, the latter predominating.

Was a sergeant in a Tennessee cavalry regiment during the late war.

Applied to me Aug. 23d, 1869, for examination in order to obtain a pension: Found two pile tumors upon the right side of the anus, with a purulent discharge from the rectum.

Considerable perineal swelling on the same side, with some redness and tenderness. Decided that a blind internal fistula existed, giving rise to purulent discharge. I made no examination of the rectum by exploration, as he lived twenty-five miles distant, and there was no time.

Sept. 11th. Requested to visit Mr. E——, at his residence. Arrived at 8 A. M., on the 12th, and found that an abscess on the left side of the perineum had opened externally, and about midway between the anus and the base of the scrotum. Pus escaping freely. Introduced a finger within the anus and found, about two inches above the sphincter, a stricture, consisting apparently of a band, and feeling like a rigid os uteri.

Passed a probe into the external opening, but failed to find it communicating with the rectal cavity.

On the right side of the anus there was tumefaction of the perineal cellular substance, with redness and pain, indicating that an abscess was forming.

Owing to the extreme soreness of the parts it was deemed inadvisable to interfere, except to apply emollient lotions, and to inject the bowel and the fistulous tract with warm water.

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Remaining till next morning, I at that time placed a ligature around the pile tumor, and gave general directions for the management of the case as were indicated.

Sept. 19th. Made another visit and found much less soreness of the parts, but otherwise unchanged. The hæmorrhoidal tumors separated on the fifth day. Able to be about the house, but the discharge continues annoying.

Jan. 15th, 1870. Did not see Mr. E. till to-day, when he called at my office. Found a fistulous opening on the right side of the anus, near the verge, and at the point where there was swelling at last report. It had opened soon after and added much to the trouble. The stricture still remains, and on introducing a probe find the internal openings of the fistulous tracts to be above the band, and cannot be felt with the finger. Excessive soreness of the parts externally, and passing the finger within the rectum causes great pain.

Informed him that nothing but surgical interference would promise any relief to his condition, and he decided to come to the city as soon as his business would admit, for treatment.

Feb. 10th, Mr. E. came to town and took a room at one of the hotels. There has been of late, as he says, torpidity of the bowels, with a sallow skin, and pain under the left scapula.

Feb. 12th. Bowels freely opened by taking comp. rhubarb pills. A quantity of hard feculent matter has been passed, relieving him very much. He can sit down with more ease than for some weeks, and the general tenderness relieved. To use enemata of warm water daily, and to have good diet, with a mild tonic.

Feb. 18th. The soreness having subsided so as to admit of manipulation, and, with the concurrence of Dr. Boyd, introduced a bivalve speculum, which revealed an ulcerated condition of the mucous membrane, with a free secretion of pus, which fills the speculum.

Very painful at the point of stricture, with the appearance of a septum or band from a portion of the coat of the intestine, besides which there appears to be another passage through which fœcal matter can pass.

Feb. 23d. Decided to make a thorough exploration, and accordingly he was placed under the influence of chloroform.

Present, Drs. Boyd and Boynton. On using considerable pressure the whole mass appeared yielding, and, with the introduction of first one, then two and three fingers, Dr. Boyd was able to break up the stricture and make an open passage. A large quantity of bloody pus and mucous tissue came away, with fœcal matter. Recovered from chloroform within an hour and felt comparatively free from pain. To have an anodyne dose of morphine, with enemata as required to wash out the rectum.

Feb. 24th. Vomited freely at midnight, but rested quite well with that one interruption. There had been a smothering sensation till after he vomited, caused probably by the chloroform. No more soreness than before the operation. Pulse full and about 90. Some appetite. Less discharge of pus, but copious fœcal stools have passed.

Feb. 25th. Returned to his home to-day and feels much relieved.

There had been some hesitation felt as to the propriety of breaking up

the stricture, as it was uncertain what was its actual character. To allow it to remain longer hazarded retention of fœces, and pus constantly accumulated above it.

March 9th. My patient returned to town and was found to have improved somewhat in general health. The stricture cannot be felt to any extent, but there is a nodulated feeling to the inside of the rectum. The fistulous openings still unchanged. There is an indurated condition of the perineal tissue, which was unwelcome, but it was decided to attempt an operation.

March 12th. Dr. Boyd present. Chloroform administered by Dr. Rhea, of Newport. I introduced a grooved director into the opening on the left side, about one and a half inches, where it seemed to encounter an angular turn in the track. Dr. Boyd then passed a strong bistoury along the director and made an incision to the angular point.

Then it was attempted to pass a probe into the fistula opening upon the ischium, with a view to cut it out. This was upon the right side. It being about two and a half inches to the inner opening of the canal, and there being danger of injuring arteries in making an incision, it was concluded to pass a ligature and tie it. Accordingly a piece of surgeon's silk was doubled and well twisted, passed through the eye of the probe. The probe then was passed into the rectum, via the fistula, bent and brought out at the anus. A tight knot was tied and the ends clipped off. It was exceedingly difficult to manipulate in this case, as the patient was not completely under the influence of the chloroform, and it was nearly impossible to accomplish anæsthesia, on account of the unfavorable position, and the extreme tenderness of the parts. A full dose of opium was given, and water dressings ordered to be applied.

March 13th. Had some sleep, but complains much of soreness from the ligature. Bowels moved freely during the night, and without pain. To continue opium and soothing applications.

March 14th. Complains bitterly of soreness from the ligature. Slept but little, and none till injections of tr. opii. combined with hyposulphite of soda and carbolic acid, were used.

There was a free discharge of bloody pus this morning. To continue the enemata, and to apply cloths wet in the same preparation, externally. To have good food, with lager beer.

March 15th, 8 A. M. Pain kept him awake during most of last night, especially on moving about or coughing. Some appetite. Pulse 72 and soft. Tongue slightly coated white. To continue same treatment.

March 18th. There has been constant pain from the ligature till to-day, and there are indications that it is cutting its way slowly out through the included texture. Bowels moved daily, and without causing pain. Till to-day I have tightened the ligature every morning, but now conclude to allow a rest for two or three days. His appetite is good and he can eat heartily of ordinary fare. To take anodyne and continue the enemata.

March 20th. Quite comfortable. Pulse full and not frequent. Tongue cleaning. Gave a twist upon the ligature this morning which caused much pain. There is some dis-

charge of pus from the ligated fistula, but less than formerly from the other side. The incised wound made to shorten the fistulous canal on the left side looks healthy. Bowels open. To be kept still in bed and have all the food he may desire. The sphincter is cut through by the ligature, and about half an inch of the subjacent tissue.

March 29th. The ligature still remaining. It has been gradually tightened, but only slight tension was admissible on account of the extreme soreness. Introduced my right index finger within the rectum and found more indications of stricture. A probe passed into the fistula alongside of the ligature, appears to enter for two and a half or three inches very readily, without going inside the intestine, and it must pass externally to the stricture band.

But very little pus escapes from the opening on the left side. Appetite good, and there has been but little pain for a few days past, except when the ligature was tightened.

April 2d. Went home to-day.

April 4th. Returned feeling no worse for his trip. Gave five comp. rhu. pills at night, to evacuate the bowels preparatory to an examination to-morrow.

April 5th, 4 P. M. Placed under chloroform. Dr. J. M. Boyd and Drs. J. M. Kennedy and C. Deaderick were present. I passed a grooved director within the fistula, to the rectum, and brought it out at the anus. Holding it firmly in that position Dr. Boyd passed a bistoury along the groove and cut the remaining portion of septum which had not been severed by the ligature. The internal opening was fully twenty lines from the sphincter, and large enough to admit the finger.

Since the application of the ligature an external pile tumor had formed, near the verge, posteriorly, and a little to the left side. At the base of this nipple-like projection was an opening which admitted a probe within the sphincter. This tumor was removed. Dr. Boyd then introduced his fingers to the rectum, and succeeded in breaking up the stricture which had re-formed at the original point. There was but very little bleeding from the cut tissue, or the crushed tissue at the stricture.

Twenty drops tr. opii. was at once given, and a sol. carbolic acid, tr. opii. and olive oil, placed within the incised part.

The fistula on the other side was not explored on this occasion.

April 10th. Since the 5th he has felt very well most of the time.

The incised part is disposed to gap, and seems disposed to heal from the bottom. Sanious pus escapes with every stool, as well as constantly passing for the want of retentive power. The condition of the other side is unchanged. There is a deep and tortuous fistulous tract or sinus which extends upwards two or three inches, and the tissue is indurated along the whole distance. Stools pass easily, but somewhat flattened or ribbon-shaped. Is able to walk about and is in very good spirits. Carbolic acid dressings.

April 16th. The open part slowly healing. The small fistulous opening still discharges pus from the bowel. There is a general indurated feel to the perineum, on all sides, with an unhealthy appearance, such as will render the healing process tedious.

Goes home to-day, with instructions to keep the bowels open with pills rhu. comp.; to inject with the female nozzle of a rubber syringe, sol. carbolic acid and hyposulphite soda.

May 6th. Mr. E. came to town, and I find the incised part has healed somewhat, but the cellular tissue is still indurated in the vicinity of all the fistulous tracts. The sinus on the left side, he says, is open still, as air passes out at times. He can pass the syringe tube beyond the stricture, and the enemata are retained. By constant use of the carbolic mixture he is able to keep the parts free from unpleasant smell, as well as cleanly. Appetite and strength improving. Looks better than at any time within the past year.

Jan. 4th, 1871. I have seen Mr. E. at times since May last, but made no examination till to day. There has been an improvement in the general health, but the fistulous openings still remain unchanged. On the right side there is a fissure at the point of incision, about half an inch deep. The unhealed surface has become somewhat callous, and the stools cannot be kept back. He is obliged to wear thick compresses in order to keep his clothing from being soiled, but manages to keep about and attend to an active out-door business.

At one time during the treatment of this case, in March, 1870, there appeared upon the chest and upper abdomen, some suspicious spots, which excited at least the possibility of a syphilitic taint. They soon disappeared after placing him upon iod. potassium a week or more, and, being a mere suspicion at the time, no note was made of the incident in my daily jottings in the case book.

Mr. E., up to a few weeks ago, (Nov., 1874) was able to attend to the duties of station agent on one of our railroads. I have seen him at times, but made no examination for two years at least. The condition is unchanged, as he informed me a few months ago, and he often speaks of coming to have surgical treatment. It has been suggested to close up the fissure, as in case of ruptured perineum, and, unless the tissue has become indurated, and in such a morbid condition as to refuse to heal when raw surfaces are drawn in close apposition, there is no doubt of success. Of the cancerous nature of the tissue involved in the stricture, I had not entertained a thought, and no microscopical examination was made of the *debris* after breaking up the contracted tissue. I had feared an incurable condition on account of the induration, which was more extended than would be expected from mere fistula. The occurrence of fistula in ano, and in perineo, should naturally presuppose a morbid state of the tissues in that region, and there is a traditionary idea, to say the least, that care should be exercised before an operation is proposed for a radical cure.

I am informed that the mother of Mr. E. is at present suffering from cancer of one of the breasts. At least she is under treatment for what a traveling cancer doctor calls cancer of the breast.

Disease of the rectum has been, under my observation of nearly forty years, rather uncommon, especially stricture.

Prof. Gross says, "it is oftener described than observed."

Ashton also remarks: "Those who have had the greatest opportunities,

and the most extended fields for observation, whose acumen in the observation of disease and its diagnosis, and whose integrity is most to be relied on, have not met with this affection as a common occurrence." It is unnecessary to quote further on this point.

It may be considered as remarkable that so few cases of disease of the rectum are met with in civil and military practice. Cavalrymen are especially *liable* to injury in riding, but cases of actual disease of the rectum from that cause appear to be rare.

In circular No. 3, Surg. Gen'l's office, page 251, we find reports of four operations for fistula in ano, and two for hæmorrhoids (removal by ligature).

I operated once for fistula in the hospital at Quincy, Ills., but found but few cases of disease of the rectum. Mr. E., whose case is reported above, informs me that he was troubled with piles and soreness in the rectum after a long raid, in which they were kept in the saddle most of the time for about a week.

He remained in the service till near the close of the war, and, as I did not become cognizant of the case till Aug., 1869, considerable time elapsed before serious trouble ensued. The abscess which gave rise to the fistula did not occur till a short time before coming under my notice. Concerning the first commencement of the stricture there is no definite history.

There is a doubt, to say the least, whether causes subsequent to his leaving the army might or might not have operated in bringing on the condition in which I found him.

Should any further facts come to notice, or a future operation be performed, I will report.

Translations.

PROGRESS OF MEDICAL SCIENCE IN GERMANY.

By EDMUND J. DOERING, M.D.

I. A CASE OF MEMBRANOUS DYSMENORRHŒA, BY DR. UNSCHULD (*Berl. Klin. Wochenschrift*, No. 45). II. ON THE USE OF ERGOT IN PNEUMONIA, BY DR. WYCISK (*Allg. Med. Central Zeitung*, No. 88).

I.

MEMBRANOUS Dysmenorrhœa is certainly one of the most painful affections the physician is called upon to treat. By its regular return, combined with the excruciating pain it produces, this disease may undermine the strongest nervous system and ruin the health of those who thus suffer. But worst of all, is the fact that uncertain as we are as to its etiology, so unsuccessful are we generally in the treatment of this disorder. The successful termination of

this variety of dysmenorrhœa in a patient under our care and the rarity of this disease have induced us to publish the following case:

The patient, a lady, twenty-six years of age, unmarried, came to us for treatment in 1872. She is of slender stature, a blonde. First menstruated at the age of seventeen years. Since that time her menses have been accompanied with considerable pain. For the last six years she has noticed the discharge of shreds of mucous membrane at each menstrual period, the latter becoming more and more painful. Bashfulness prevented her from consulting a physician at the time, until finally, her general health failing rapidly, her parents called in a gynæcologist who dilated the cervix after Sims's method, but without producing any amelioration of the symptoms. When she came to Neuenahr, (a famous watering place in Germany,) to consult us, she had entirely despaired of ever regaining her health — emaciated, exhausted, her general health shattered, she presented but little prospects for a cure by our treatment with baths. We, therefore, persuaded the patient to submit also to local treatment. By touch the uterus was found to be retroverted, painful on contact and somewhat enlarged. Slight fluor albus for a short time after each menstrual period. The other organs healthy. As the patient expected her menses in a few days, we ordered only warm mineral baths (97° F.) and douches of the same temperature. The menses were ushered in by distinct febrile symptoms, as great lassitude, chilliness, fever and general constitutional disturbance. These symptoms lasted for about one day and were followed by the menses which appeared scanty, accompanied with severe pain in the back, pelvic pains and headache.

On the third day violent expulsive uterine contractions occurred, so painful as to cause several attacks of syncope. Skin hot and dry, great thirst and quickened pulse. Soon after the shreds of mucous membrane were expelled the pain diminished, but the inflammatory symptoms did not subside until the fifth day, while the flow of blood lasted a few days longer. The patient stated that this series of symptoms occurred regularly every month. Under the microscope the membranes presented the usual appearance as described by Hausmann and other observers.

Having found that the warm baths and douches only seemed to aggravate the symptoms, we concluded to adopt a more strictly antiphlogistic treatment to diminish the hyperæsthesia of the uterus. For that purpose we reduced the temperature of the baths to 80° F., directing the patient to remain for fifteen minutes at a time in each bath. While in the bath a speculum was introduced, made of silver wire and so arranged that the branches at the mouth of the instrument stand twice as far apart as at the end, allowing the water to flow in freely. The baths were always followed by the cold douche. During the intermenstrual period local abstractions of blood were made by means of Braun's hysterotome, followed immediately by a warm bath. We also made a trial with injections of a solution of nitrate of silver into the uterine cavity, but without producing any good results. At the next menstrual period we directed the patient to take twice daily a warm min-

eral bath (100° F.), omitting the speculum. This plan of treatment was pursued for three months with very satisfactory results, for her general condition improved, the pain greatly diminished, and the discharge of the shreds of mucous membrane did not occur for several consecutive periods, whereas they had formerly appeared regularly every month.

In the spring of 1873 she got worse, and in the summer of the same year, she came again to us for treatment. The same course of treatment was adopted as the year previous, but improved in so far as we directed vaginal injections of cold water (60° F.,) to be made for fifteen minutes twice daily, by means of Kirsch's vaginal irrigator. The condition of the patient again improved rapidly, so that she was able to return home much sooner than the year previous, with renewed energy of life. According to last accounts she enjoys good health, the membranes having appeared but once since August, 1873.

The success of the treatment we attribute mainly to the baths, which contained CO_2. These baths increased the local nutrition and improved the tone of the capillaries and uterine muscular fibres, enabling the contents of the uterus to be expelled easier, thus diminishing the pain. Furthermore, the warm baths, the vaginal injections and the local abstractions of blood served to diminish the chronic inflammation. And finally the general condition of the patient improved by the internal use of our mineral springs, the residence in the country and the quiet life in our watering place.

This case proves that Sims's assertion, that the treatment of membranous dysmenorrhœa is only then of use, if directed against the fundamental trouble (usually displacement of the uterus) is incorrect, for in our patient the retroversion of the uterus very probably originated during the course of the disease in consequence of the dysmenorrhœa. And further, by the deficiency of our knowledge as regards the etiology of this disease, only an expectant plan of treatment can be admissible. In conclusion, we also wish to call attention to the falsity of Hausmann's theory, who states that this disease is due, in all cases, to conception: in short, is nothing else but a repeated abortion. Our patient was, for months, under our close and personal observation, and we can assert, positively, that she did not have sexual intercourse with any person; that consequently conception was not the cause of the disease in her case.

II.

It is reasonable to expect that ergot should produce contraction of the blood-vessels just as easy, if not more so, in the lax pulmonary tissue than in the more resistant tissue of other organs, and that consequently anæmia of the lung will take place the same as anæmia of other mucous membranes after the use of ergot. Starting on this hypothesis the author tried this remedy in six cases of croupous pneumonia, and the result demonstrated the correctness of his views. The contraction of the small pulmonary vessels corresponds to a thickening of their walls with a narrowing of the pores, thus diminishing and even stopping further transudation. Finally the anæmia which is produced, by increasing the activity of the lym-

phatics also promotes absorption and resolution of the inflammation. The following case is a good illustration of the action of ergot in pneumonia: A robust, strong man, fifty years of age, who had been bled on account of the severity of the initial symptoms of an attack of croupous pneumonia, suddenly expectorated great quantities of a serous mucus (nearly two pints during one forenoon) which was found to be strongly albuminous. Alcohol and benzoic acid were given freely but without producing any beneficial effect. Then ergot was administered in ten grain doses every fifteen minutes until five doses had been taken, with the result that the expectoration ceased in two hours, the numerous rales all over the chest disappeared, leaving only some crepitant rale at the seat of the disease, the upper lobe of the right lung. Several relapses were treated likewise with the same prompt effect. In the other cases of pneumonia the remedy was also given with excellent results.

Ergot is contraindicated in emphysema, morbid friability of the cerebral vessels, further, if the exudation is excessive, and finally in patients who are too much exhausted. In a case of emphysema with habitual excessive expectoration ergot was given, causing a serious degree of cyanosis. In another patient with spermatorrhœa and dilatation of the spermatic and scrotal vessels, hypodermic injections of ergot into the scrotum improved the local trouble, but caused a slight attack of apoplexy. We must mention though, that in the last case strychina was also given, internally, which, according to recent investigations, likewise increases the vascular pressure.

GLEANINGS FROM THE FRENCH.

Translated by Fred. J. Huse, M.D.

THE use of Esmarch's Elastic Bandage as a means of obtaining local anæsthesia, formed the subject of a communication by Dr. Chauvel to a recent meeting of the Surgical Society of Paris, and is reported in *La France Medicale* of Nov. 21st, 1874.

In order to eliminate every cause of error, Dr. Chauvel first obtained the measure of the normal sensibility of each patient; then, applying the elastic compression, which he maintained during a certain space of time, he proceeds in accordance with a fixed method to determine the condition of sensibility. Fifteen observations were made, twelve upon the lower extremity, three upon the upper extremity. Only one of the subjects upon which these experiments were made (none of them were subjected to an operation), proved refractory; all the others exhibited a diminution of sensibility. "Anæsthesia never appears immediately, but is developed after from five to twenty minutes. Insensibility is obtained more rapidly in the upper extremity than in the lower extremity, while the degree of constriction of the member by the bandage, and especially by the rubber tube, has a marked influence upon the rate of the development, and upon the degree of the local anæsthesia."

Insensibility first appears in the parts most remote from the trunk, and slowly proceeds towards the centre; it is also in these same parts that it is manifest in the highest degree. In short, in every case, except the one where sensibility seemed to remain perfectly normal, there was an evident, but almost always incomplete, anæsthesia.

While susceptibility to pain is the most rapidly effaced, and the absence of pain is the most noticeable phenomenon, the sense of touch persists throughout, and Dr. Chauvel questions whether the absence of painful sensation would be sufficient to allow of more serious operations than those which he has performed.

Two of these were upon in-growing nails. In the first case the surgeon stripped off a portion of the nail, three lines in breadth, yet the patient affirmed that the suffering was slight. In the second, the remains of the nail were torn away without causing any very severe pain, and the patient easily supported, for more than ten minutes, the application of Vienna paste to the matrix of the nail.

Upon a soldier suffering from irregular pains, probably those of sciatica, the surgeon made cauterizing punctures, which caused very intense pain upon the thigh, less intense pain upon the leg; it was only at the tip of the great toe that the application of the hot iron, made with a certain degree of moderation, failed to produce any pain.

While these facts are by no means conclusive regarding the utility of this method of producing local anæsthesia, it is believed that additional investigation may develop practical results.

ANÆSTHESIA, by simultaneous use of chloral and chloroform, has been lately suggested by Dr. Fornet, to the Surgical Society of Paris, as likely to replace the combined use of opium and chloroform recommended by Claude Bernard, and practiced by many surgeons. One of the cases cited is that of a little girl, five years of age, who had symptoms of stone in the bladder. Thirty grains of chloral were administered, and during the sleep that followed she was caused to inhale chloroform after which the bladder was examined and a deposit of mucus withdrawn, containing gravel.

Another case is that of a vigorous man of twenty-five years, upon whom the administration of chloroform had already failed, suffering from abscess of the anus, with exceedingly painful contraction of the sphincter. Seventy-five grains of chloral were given and in an hour and a half the patient sunk into a quiet sleep. Chloroform was then administered, and the abscess of the rectum was opened without rousing the patient.

According to *La France Medicale*, the ideas which have been formulated by Dr. Fornet are at least worthy of careful consideration. He proves that there is an enormous difference between the administration of chloroform during waking and during sleep. When the patient is awake a large quantity of chloroform is required, and there then exist the dangers of intoxication. Moreover, the patient is excited by the fear of becoming insensible, whence there is danger of nervous sideration. But while he affirms that his method of procedure affords none of these dangers, the two cases he has published are by no means sufficiently convincing.

Drs. Dolbeau, Guyon, and Demarquay, have called attention to some of the unpleasant results which may follow the use of chloroform after doses of chloral, administered by patients to themselves, without the knowledge of the surgeon. A lady under the treatment of the distinguished surgeon of Beaujon Hospital, for an exceedingly painful anal fissure, had been accustomed to take large doses of chloral to alleviate her distress. Upon the morning fixed for the proposed operation by forcible dilatation, Dr. Dolbeau found the patient sleeping, and, being unaware that it was the result of a large dose of chloral taken during the night, she was caused to inhale chloroform and the operation was performed without disturbing the patient. Though only a small amount of chloroform had been found necessary, Dr. Dolbeau was obliged to spend several hours in rousing her from her sleep; when thoroughly shaken she would speak, but as soon as the conversation ceased she would again fall asleep, and the skin would become cold and moist.

Last year Dr. Dolbeau performed resection of the inferior maxillary of an English officer, for a very painful epithelioma. The patient passed readily under the influence of chloroform, and after completion of the operation was easily aroused; but there was a tendency to sleep and coldness which was not overcome until the following day. This patient had taken, during the night preceding the operation, over one hundred and fifty grains of chloral.

Another patient with affection of the rectum had taken more than two hundred grains of chloral the night previous to being operated upon. He continued to manifest a very great tendency to coldness, and only survived forty-eight hours.

Until this association of chloral and chloroform has been tested by further experimentation, it would appear to be advisable, according to the opinion of these gentlemen, to reserve it for certain particular cases, such as those complicated with some nervous disorder, for example.

Editorial Department.

THE NEW YEAR.

WITH this number of the EXAMINER, we send to all our readers a cordial greeting, and sincerely wish them a *happy New Year*. As the bell tolls out each parting year and rings in the new, the wheels of time appear, to us, to acquire accelerated speed; and to demand of us sharper, quicker work to avoid falling behind in the race of life. It seems but as yesterday since, with beardless face and timid thought, we dropped the hoe, the scythe, the flail, and with hesitating step left the old stony farm, and wended our way to the country doctor's office to take the first medi-

cal book in hand. And yet the knell of departed time and the happy ring of the new year, have greeted us more than forty times since that day. Then two leading thoughts occupied our attention, and became formulated in the question, How can we accomplish the most real good in this life, and at the same time acquire an honorable position among men? To practically solve this question has been the work of the last forty years; and yet, to-day, in turning the thoughts inward for honest self-examination, we find the same question still prompting and controlling nearly all our work. Whether we have succeeded or failed we leave for others to decide. This much we know, however, that while sitting here in the last lingering hours of the year 1874, and looking back over the past we find but little to regret, and nothing of which we would complain. In the whole record we cannot find an hour devoted to sensual indulgences; not even one hour given up to the lulling influence of tobacco or the exhilarating charms of the wine cup.

We have neither tarried with the sluggard in the arms of Morpheus, nor wasted time and thought in idle wishes and unexecuted resolutions, nor sat down by the way-side to whine, because some one of our brethren was outstripping us in the race of life, or because the world did not duly appreciate ourselves or our profession. We have never prostituted our thoughts for a moment in plotting to circumvent a supposed enemy or in organizing rings or factions, either professionally or socially, for our own aggrandizement. Neither can we think of a single human being to-day, to whom we would not do an act of kindness were the opportunity afforded us. In truth, the effort to solve the question that occupied our thoughts at the outset, has left us no time for self-indulgence, for grumbling, for childish repining, for jealousy of cotemporaries, or even to refuse to do a good deed, because it might possibly promote the interests of a supposed rival. To combat vice and promote virtue; to help the poor; to sustain the weak; to lift up the fallen; to alleviate the suffering of the sick; and to improve, sustain and defend the social and educational interests of our profession, have not only been sufficient to absorb all our time and thought, but also to compel a literal obedience to the maxim, "whatsoever thy hands find to do, do it with thy might." Now reader, if you are in the morning of your professional career, as you enter upon the threshold of this the last quarter of the nineteenth century, and the chimes that welcome the dawn of 1875 are still lingering in your ears, take up the same question that occupied our thoughts when we first resolved to enter our noble profession; turn it over, scan its bearings, see what a grand central beacon or guide it forms around which to gather the work of a life time.

If kept steady before you it will prompt to every good word and work; fill the world's landscape with green oases, and life's past with precious memories, leaving no room for vain regrets, or time for puerile pleasures or repinings. N. S. D.

UNUSUAL OFFER. — Dr. E. S. Gaillard, of Louisville, Ky., editor of *The Richmond and Louisville Medical Jour-*

nal and the *American Medical Weekly*, makes to the public this unusual and liberal offer: To subscribers to the first journal, twelve handsomely engraved portraits of distinguished European and American physicians; to subscribers to the *Weekly*, one of these portraits in each of the two volumes for 1875. The price of the first journal is $5.00 annually, and that of the last, $2.00 for the same period.

Society Reports.

CHICAGO MEDICAL SOCIETY.

MEETING OF DECEMBER 7TH, 1874.

Reported by D. C. Stillians, M. D.

DR. PHILIP ADOLPHUS read the following paper on

THE USE OF THE OBSTETRICAL FORCEPS.

Gentlemen — We will not attempt an exhaustive article on the use of the obstetric forceps, but speak of those points only on which authorities differ. We will examine the subject, pointing out errors having the endorsement of eminent men, and stating the latest practical reforms.

A critical analysis of different authors will discover many conflicting directions; author has copied author, until an assertion or theory, unsupported by fact, has, by constant repetition, assumed the force of law.

Much has been presented in an abstruse form, calculated to intimidate the physician, and restrain him from rendering assistance at the proper period.

Demonstrations on the *phantom* had evidently given birth to rules which cannot be adapted in deliveries, without injuring the woman. Thus, the single curved forceps was first employed, and authors taught, that the blades should always be applied "to the os parietal, and extending on either side, in the direction of the occipito-mental diameter of the head," (Bedford,) whether the head presented antero-posteriorly, obliquely or transversely. When Levret and Smellie added the sacral curve to the instrument, most authorities, amongst whom we may note Simpson, Dewess, Meigs, Hodge, Bedford and Elliot, (although the double curve of the instrument was adapted solely to the sacral curve of the pelvis) still maintained, that the blades of the forceps should be applied to the lateral portion of the child's head, regardless of its position in the pelvis. Thus they teach even to-day, that the head in a transverse position, in the superior strait or cavity or inferior strait, should be grasped by the forceps, with one blade applied in front of the sacrum, and the other in front of the symphysis pubis.

Moreover, eminent men, inexperi-

enced in the use of the forceps, were afraid of its general introduction.

Thus in Dr. Joseph Clarke's mastership of the Rotunda Hospital, Dublin, from 1787 to 1792, during which 10,287 deliveries took place, the forceps were used only fourteen times, and in his private practice, extending over a period of forty years, during which he attended 2,878 labors, Dr. Clarke only once attempted to apply the forceps, and then did not succeed. (Collins' Practical Midwifery, vol. 18.)

In the same hospital, under the mastership of Dr. Charles Johnson, from 1842 to 1845, in 6,702 deliveries, the forceps was only used in eighteen cases.

I may give the statistics of the Royal Maternity Charity, as quoted by Dr. Ramsbotham, where, out of 48,996 deliveries, forceps, long and short, were used seventy-three times, or once in 671.2 cases. Consequently, the English became experts in embryotomy, and the lives of mothers and children were sacrificed in just such cases, where the French, and especially the Germans, used the forceps. A glance at Churchhill's Statistics will illustrate this.

In forceps cases, one child in five dies, and one mother in thirty-four; craniotomy necessarily destroys all the children, whilst the maternal mortality is estimated as one in five.

Of late, the double curved forceps are used where the perforator was formerly employed; nevertheless, statistics of English and continental midwifery, on this subject show a marked difference in favor of the Germans.

The frequency of forceps cases has been estimated by Churchhill to be amongst British practitioners, about one in two hundred and forty-nine; French, one in one hundred and forty; and Germans, one in one hundred and six.

Churchhill lays down the rule, that forceps are to be applied in no case, till we are perfectly satisfied that the obstacle cannot be overcome by the natural powers with safety to the mother and child, and in this opinion he is upheld by most authorities.

Dr. C. C. P. Clarke, in Transactions New York Medical Society, 1870, comments on this as follows: "It is such a rule as this, causing perilous delay, that makes this instrument, in crude statistical tables, seem the means of death."

The time will arrive, and it is foreshadowed now in the practice of not a few practitioners, when the forceps will be used in cases where delivery would have terminated by the natural powers, whenever the second stage of labor ceases to be actively progressive. By this procedure much anxiety, pain and exhaustion is spared the mother. It is especially indicated in primipara, where owing to delay, so many children are still-born.

Prof. Thos. Savage (in *British Medical Journal*, August 14th, 1869, page 183,) illustrates this point. The following table shows his practice;

In	1864,	out of	73	labors,	forceps	were used	3	times, or	1	in	$24\frac{1}{3}$ labors.
"	1865,	"	154	"	"	"	15	"	1	"	$10\frac{1}{3}$ "
"	1866,	"	173	"	"	"	18	"	1	"	$9\frac{2}{3}$ "
"	1867,	"	203	"	"	"	37	"	1	"	$5\frac{2}{3}$ "
"	1868,	"	204	"	"	"	31	"	1	"	$6\frac{2}{3}$ "
TOTAL,				807 labors in which forceps were used 104 times.							

Of these eight hundred and seven cases, five children were still-born, and one maternal death occurred from puerperal fever. He states that in none of his cases has he found any ill effects afterwards, such as laceration of the soft parts, or extensive rupture of the perineum.

The best forceps for the general practitioner are those that can be used whenever a suitable indication for the delivery of the child presents itself, whatever the presentation of the head and its position in the pelvis.

We, therefore, would reject the single curved forceps, because the shape does not accommodate itself to the direction and form of the pelvic axes. For it can be used only when the head is low down in the excavation or close to the perineum.

The double forceps should be chosen, for they can be applied to any portion of the pelvis, the leverage is greater, and any operation pertaining to this instrument can be performed with it. The possession of one forceps only is necessary. The multiplicity of instruments is a sign of weakness. The use of one instrument perfectly adapted to the work it has to perform is always a desideratum. Simpson, Hodge, as well as Barnes, advise the rejection of the short forceps, for the more efficient and powerful long instrument. Therefore, whenever in this paper the forceps are mentioned, we do not allude to the short instrument, but to the long double curved forceps.

It is our duty to use the forceps, whenever in a head presentation, with probable room for the head to traverse the pelvis, and with the os fully dilated or partly dilated and easily dilatable, the longer continuance of unaided labor involves danger either to the mother or the child. (C. C. P. Clarke op. cit.)

The forceps should also receive a tentative but patient trial, in cases which require the mutilation of the fœtus, for the indications are often not to be distinguished and can only be determined by trial.

Even symptoms, pointing *towards exhaustion*, impaction and contusion, and not merely *the actual state* of exhaustion, collapse, contusion and inflammation, call for the application of the forceps.

Time as an element, must not be considered. The state of the patient determines our action.

For a woman must be conducted through a labor, natural or instrumental, without a dangerous strain on her system. She must be relieved artificially whenever, in spite of the administration of sedatives, the effects of irritation show themselves.

The administration of anæsthetics in forceps labors should be avoided, especially where long-continued, steady tractions are necessary to relieve the mother. It is a satisfaction in these cases, even to exceptionably skillful and experienced men, to be able to ascertain, by the expression of the patient's countenance, that no injury is inflicted by the instrument. Besides, in just such cases, the non-administration of anæsthetics gives the child an additional chance of safety.

The forceps adapt themselves to the anatomical condition of the pelvis and soft parts; not to the position of the head. The blades of the forceps are fashioned to accord with the axes of the pelvis; their sacral curves must follow and coincide with the

utero-vaginal curve, therefore, they must be introduced, placed into and removed from within the pelvis according to these laws. Any other course leads to injury of the mother's parts.

In fact, authors who order the forceps to be placed along the child's head, place them, after locking, on the sides of the pelvis, for they insist, (I quote Bedford's words, fol. 56, ed. 1871,) that "*the head being in a diagonal position, after locking the instrument, and before making any extractive force, the first thing to be done is, gently to turn the forceps, for the purpose of producing the movement of rotation, which will necessarily change the head from the diagonal to the direct position.*" These directions are placed in italics, and he adds "Many a child has been sacrificed, and the mother cruelly lacerated, from the neglect of this fundamental principle in delivering by forceps." Ramsbotham, however, states that when the impediment of the brim is overcome, the head turns of its own accord with face towards the hollow of the sacrum, *without the use of any directing power on our part.*

The same author says, (*Medical Times and Gazette*, 1862,) "In employing the short forceps, I lay it down as a rule, that the blades should be passed over the ears, the head is more under command when embraced laterally, and there is less danger of injuring the soft parts during extraction." He, however, adds, "*But I confess that I have for many years been accustomed, however low the head may be, to introduce the blades within each ilium, because they usually pass up more readily in that direction.*"

Dr. Barnes, commenting on this passage in his "Obstetrical Operations" says: "I think I am not wrong in believing, that many others do the same thing, some not knowing it, and even imagining that they are following the ancient rule. Therefore it is to the sides of the *pelvis*, and not to the sides of the *head*, that the blades of the forceps should be applied. If the child's head is placed diagonally, one blade on being laid within each ilium will fit the forehead, the other will apply itself to the occiput; the correctness of this assertion is proved by inspection of the head, after delivery, when the impress of the blades of the forceps over one of the oblique diameters of the fœtal head will be seen, and almost never along the parietal bones.

We herein follow the authority of the German accoucheurs quoted by Caxeaux, (fol. 69, ed. 1868,) who recommend the blades to be placed on the sides of the pelvis in all cases.

This proposition once established, what amount of ambiguity, complexity and false teaching vanish? What becomes of the variations of application of this instrument, in the different positions of the head, at the inlet, cavity and outlet, which are taught us by authors? Those may be practiced on the phantom, but would crush the soft parts of the parturient patient.

Therefore place the patient on the back, as directed in the books, take the blades of the forceps, join them, and holding the instrument with the concavity of the pelvic curve forward, and the blades in the position they ought to occupy in the pelvis.

Consider that you are about to embrace between them the globular head of the fœtus, which you know is within the pelvis; that you therefore

must pass the separated blades within the pelvis, according to correct anatomical principles, placing one within the left, and the other within the right ilium, the convex portion of the forceps fitting the concave portion of the sacrum. Consider also that, having placed them opposite each other, you have to lock them, and after locking, the two blades with the head of the child must become a unity. Thus, the handles being grasped, the child is to be extracted by following the anatomical curve of the sacrum, vagina and perineum.

Then proceed to separate the warmed and oiled blades, and take the left or male blade near its centre, into your left hand, and introduce it into the vulva, slip it along the two fingers of the right hand, put between the cervix uteri and the child's head: it will guide itself and be placed alongside the left lateral portion of pelvis, embracing the head.

Leaving it in the hands of an assistant, take the right or female blade into your right hand, introduce it into the vulva, along the palps of the fingers of the left hand, which are placed between the os uteri and the child's head; and it will guide itself along and within the right lateral portion of the pelvis, and there embrace that part of the head, which it will find there. *Do not look for any particular portion of the child's head; disregard its position; but be sure to regard the anatomy of the hard and soft parts of the pelvis.*

Your blades, thus anatomically conducted, will enter easily, instinctively and unerringly, and will place themselves on each side of the globular head, which they will embrace.

Do not watch the handles of your forceps, as the books teach you; do not burden your memories with a thousand details, which you will forget at the bedside.

Let your brain have a thorough conception of the anatomy of the pelvis, its containing head, the adapting curves of the forceps, and the act you are to perform: the hand will then execute the bidding of the will, when the blades of the forceps disappear from sight.

Your forceps will lock easily, provided you have met with no resistance during their introduction. If you meet with it, you must overcome it by a gentle backward, upward, and inward movement, which will result in placing the blades fairly upon the head; at the same time carrying them back into the axis of that part of the utero-vaginal canal, in which the head is situated.

If you cannot lock the forceps, after fair and skillful trial, remove the blades, examine the pelvis, look for deformities, and determine between turning and craniotomy.

Then extract, steadily, an assistant pressing the retreating uterus downwards. Rest, during the absence of a pain; extract according to the anatomical direction of the sacrum, vagina and perineum, until the child is born.

Authors tell us, whilst the head is distending the perineum, during the use of the forceps, to sustain it or have it sustained. The practitioner cannot extract in difficult cases, and support the perineum at the same time. Moreover, assistants skilled or otherwise, obscure the parts, and prevent the practitioner from seeing and feeling the amount of distention. There is less chance of its rupture in

forceps operations, for the perineum is distended gradually, intelligently and anatomically, by the will of the physician; should however a predisposition to laceration exist, it cannot be avoided.

How much traction and pressure you can apply in the extraction of the head cannot be taught. In ordinary cases as little as possible; in difficult cases as much as experience and intuition will teach. It may be necessary, in extreme cases, (namely in occipito-posterior positions, which are further complicated by disproportion between the pelvis and the head) to brace the foot against the sides of the bed, to pull with your arms (and not with your back) until overcome by sheer exhaustion.

Some authorities call this bad practice, but it is not so, for it has saved many a child from the crotchet.

To use the words of Elliot, "You may find that just such tractions are the only ones which can terminate a labor without recourse to embryotomy; and that just such tractions, repeated again if necessary, may alone justify the subsequent resort to embryotomy."

Is the use of the forceps dangerous?

In cases where no deformity of the pelvis exists, when the head has rotated under the arch of the pubis, or when it is within the pelvis, the use of the forceps is without danger to mother and child. Gentle tractions with an occasional oscillation will suffice to deliver the head. These represent the majority of cases.

There is danger of bruising the soft parts of the mother, in the use of the forceps.

1st.—We should be careful when applying the blades, to introduce them within the os uteri, and not between the vagina and the neck of the womb. We should feel for the edge of the os uteri, place the palps of our fingers on it, and guarded by these, slip the blade of the forceps within the os uteri, else we perforate the culde-sac of the vagina, and penetrate into the peritoneum.

2d.—If we follow the directions of reputed authors, and apply the forceps to the sides of the head, where, according to Byford, "it is situated diagonally with reference to pelvic curves, we incur much danger of touching the sides of the pelvis with the end of the blades, and bringing them in contact with the ramus of the ischium, at the outlet, and thus dangerously contusing the soft parts at these points." He adds, "I think, indeed, that there is very much more damage done to the soft parts of the mother, by making the diagonal application of the curved forceps, than there would be if the rule was to use them with reference to the pelvic curves entirely." (Byford, fol. 317, edit. 1873.)

3d.—The direction of Tarnier and others, to correct a transverse or posterior occipital position, by rotating the forceps, after having applied it to the sides of the head, upon its own axis, in order to turn the head in the cavity of the pelvis from behind forward, bringing it first to the side of the pelvis, and finally behind the pubis, *should be condemned.* If followed, extensive lacerations, contusions, and their consequences must result. These cases should be left to nature, for according to Miller and Leishman, anterior rotation will in most instances be effected; should this not occur, apply the forceps on the

sides of the pelvis, and deliver with the occiput posteriorly.

4th.—Should great obstacles to the delivery of the head exist, traction as we have already stated must be increased; the greater the traction, the greater the pressure. Increased pressure means danger to the child's life. Accordingly we have, as described by Schrœder, superficial dermatitis, suggillations and even circumscribed gangrene externally, and lacerations of the venous sinuses, and of other blood-vessels of the cranium within, which often produce the death of the child. Yet the use of force is justifiable, and is the only choicc left the operator; craniotomy would otherwise have to be performed. Hodge's remarks on this point are so just, that I will reproduce them here; and his views on this point are endorsed by Dewess, Barnes, Elliot and Schrœder. He says: "Our practice must be regulated, not so much by the idea how much compression can be borne with impunity, but how much is absolutely demanded to accomplish delivery;" and Elliot states, that great traction and compression offer the child a chance that the perforator can never offer, and therein lies its advantage.

In concluding, a few words may be said of the use of the forceps, when the head is above the superior strait.

The forceps ought not to be used when the head is floating and movable above the superior strait. We should wait until it becomes wedged into the pelvis. "In the contracted pelvis, the use of the forceps is contra-indicated until the head has passed through the contracted brim" (Schrœder, fol. 17, edit. 1874).

Should the life of the mother and the child be endangered by convulsions, hæmorrhage, prolapse of the cord, or excessive volume of the head, we must turn and deliver. Almost all authorities are agreed on this point, yet everyone gives the rules of a procedure of a plan which they condemn.

DISCUSSION.

The paper after being read was briefly discussed and criticized by various members of the society.

Dr. Earle favored the use of forceps as often as necessary, but objected to their employment as a means of saving time; hæmorrhage was more likely to occur where forceps are used and delivery hastened, and it was desirable to make pressure on the abdomen following the contracting uterus as the child is being withdrawn.

Dr. Bridge had used pressure over uterus to facilitate labor without the success he was led to expect from the advocates of that method. He agreed with the author and believed that the use of forceps was the subject of the day and hour in obstetrics.

Dr. Quine concurs with the author's views, except in that he believes it practicable and advisable to apply the forceps in some cases before the head is engaged in the superior strait. He has used them twice in this way and without encountering great difficulty. The instruments may be used oftener than there is need, but it is better to err in this direction than to be too hesitating in their employment. Forceps may be used to obviate laceration of the perineum. It is not so difficult as it seems to be imagined to adjust the forceps before the head is engaged in the superior strait, and in such cases where there is an urgent indication for speedy delivery, he considers it

his duty to try the forceps before resorting to podatic version.

Dr. Adolphus: The uterus if foiled works itself into a fury and tends to produce laceration of the perineum, but we may by the forceps regulate the degree of tension of the soft parts. Forceps are not used as often as they should be in this country. Where the contractions from their energy and frequency render the occurrence of laceration probable, he is in the habit of prescribing morphia sometimes with and sometimes without ant. et pot. tart. Where a young man fails in the application of the forceps, it is the fault of his teacher. He prefers to make version rather than attempt to use forceps before the head is engaged in the superior strait.

Dr. Hutchinson used forceps without hesitation when it was necessary to do so; he applied them in a common sense way and *held on*, and he considers the directions for their application to particular parts of the child's head to be unworthy of serious consideration.

Dr. Pearson considers the use of forceps above the superior strait preferable to version. Toward the close of the meeting this gentleman tendered his resignation as a member of the society. It was accepted.

REGULAR MEETING, DECEMBER 21, 1874.

DR. F. C. HOTZ read the following report of experiments made by Drs. Prœgler, Wild, and himself, during the past summer on the

TRANSFUSION OF LAMB'S BLOOD IN THE HUMAN SUBJECT.

Over two centuries ago the transfusion with blood of an animal into human beings had been practiced with the idea of invigorating the broken-down constitution of invalids. But the hopeful expectations that at last the secret of prolonging life had been discovered, were sadly disappointed. The operation failed, and for two hundred years it rested in peace, to be revived once more, and to gain some notoriety again by Dr. Oscar Hasse, (Nordhausen, Germany) who in the early part of this year published an account of fifteen cases of direct transfusion of lamb's blood ("Die Lammblut Transfusion beim Menschen", von Dr. O. Hasse, Leipzig, 1874). He transfused seven times for phthisis, with five good results and two failures; four times successfully for chronic anæmia, and once for severe hæmorrhage with placenta præria; once for cachexia from caries with temporary improvement of the patient; once for carcinoma without benefit, and once in a case of paralysis agitans, which died five hours after the operation, under the symptoms of cerebral apoplexy.

Summing up his results, Dr. Hasse says, on page 62: "As to the greatest gain, I would like to call the attention to the most material aid which we have found the direct transfusion of lamb's blood to give us against phthisis. For just in these cases the success was simply wonderful; the general health of these patients was soon perfectly satisfactory, and the local disease continued to improve

steadily, as confirmed by the physical examination."

So enthusiastic a statement apparently based upon facts, could not fail to make an impression on the medical fraternity, and to induce others to try the operation. The fiasco it had met with in former times, could not be a reasonable objection to a new trial, for do we not flatter ourselves with having improved since that time, in our knowledge of human anatomy and pathology, as well as in surgical operations and instruments? Are not other operations (e. g., for catarrh) which in former days achieved the most pitiful results, now the brightest stars of surgical art? Perhaps the same was the case with the transfusion, and if it proved as efficient in arresting pulmonary phthisis as Dr. H. claimed it to be, it would certainly be the most valuable acquisition. A priori, it is true, we could not understand how the transfused blood was to act upon the pulmonary disease. It did not seem very likely that the simple addition to the blood of a few ounces of fresh lamb's blood, would materially influence so complicated a trophic disorder as the phthisis is the result of. But we are daily using a great many remedies, because by experience we know them to be useful, although we cannot comprehend their action fully yet. At the present time we do not decide upon the merits of new therapeutics by theoretical speculations, but by experiments. This method only could determine as to the value of Dr. Hasse's operation, and the great importance attached to any question referring to the treatment of phthisis, demanded a careful and thorough investigation. Such was made during the summer by Drs. Prœgler, Wild, and myself, performing nine transfusions with lamb's blood. I shall presently give you the results of our operations; but first, let me say a few words about the modus operandi.

Our method of operating did not differ from Hasse's materially; a few modifications were introduced to simplify the operation. A young healthy lamb was securely strapped on a suitable board, the wool removed from one side of the neck, and the carotid artery exposed to at least one and one-half inches in length. At the central end (*i. e.*, towards the heart,) a small clamp was applied for temporarily interrupting the circulation, while at the peripheric side (*i. e.*, towards the head,) the artery was permanently closed by a ligature. The piece of the carotid thus included between the ligature and clamp was then opened sufficiently to allow the introduction of the bulbous point of a glass tube, to the other end of which a piece of india-rubber tube, about three inches in length was attached. After the opened artery was carefully cleansed of any coagula, the glass tube was tied in. Leaving the lamb then for a few minutes, we turned our attention to the patient. Sitting in a chair, he put his arm on a table; a subcutaneous vein of suitable size was selected, exposed by a sufficient incision, and ligated at the peripheric angle, while compressed with the finger at the central angle; the intermediate piece opened, a silver canula was inserted far enough, as to be held firmly by the elastic wall of the vessel. For this purpose the silver tube was made very slender and slightly conical. At this moment the lamb was placed on the table with its neck

opposite the patient's arm; the compression of the vein discontinued, a few drops of blood would fill the silver canula by reflux, and at this very instant the clamp was removed from the carotid artery of the lamb; and when the arterial blood almost instantaneously filling the glass tube and rubber was discharged from the mouth of the rubber tube, this had to be nicely connected with the silver canula. In order to facilitate this very important manipulation, we attached to the rubber a short conic nozzle, which nicely fitted in the funnel-shaped mouth of the silver tube. By this means the connection could be established quickly and surely while the blood was flowing, and all danger of air entering the vein was obviated.

The regular symptoms recorded during the transfusion, were a sensation of warmth in the arm, a rapidly increasing redness of the face, perception of snowflakes, dizziness, nausea and vomiting, pain in the back, and dyspnœa, which finally increased to such a degree as to necessitate the interruption of the transfusion.

From the first moment that the blood began to enter the vein, our assistant took an accurate account of the time; in our cases the transfusion lasted from eighty to one hundred and twenty seconds. The operation over, the vein was closed by digital compression, the silver tube in connection with the rubber withdrawn, and the lamb's blood allowed to flow into a glass for ten seconds more, in order to ascertain by this quantity the total amount of transfused blood.

Then the central end of the carotid was ligated, the whole apparatus removed, and the wound of the lamb's neck united by a few stitches. The patient's wound was dressed simply with wet lint, and in all cases healed favorably.

About one-half to one hour after the operation, the patients were thrown into a violent rigor, lasting fully an hour, after which they felt greatly exhausted, and fell into a sound sleep.

The first urine passed after the transfusion, was more or less bloody in six cases, and in three cases, the sputa were also tinged with blood. But the urticaria which Dr. Hasse observed almost regularly, appeared in one case only.

And now, gentlemen, I will give you a brief report of our cases, stating the status quo ante, and a few months after the transfusion.

CASE 1.—Mr. Kl——, aged thirty-two, a German teacher, had been suffering from pulmonary disease for over two years; anæmic, pretty emaciated, coughing frequently, and raising a copious amount of puriform sputa; no appetite. Over the apex of the lungs, in the first and second intercostal space, dullness of percussion, and bronchial breathing with moist rales; the lower portion of the lungs normal. On the thirtieth of May, transfusion of eighteen ounces of lamb's blood; six days later, urticaria over his whole body; during June and July, better appetite, improved general appearance and physical strength. The cough however did not abate, and the patient gradually grew worse again. An examination made October 15th, confirmed a decided progress of the disease, the consolidation of the lungs extending to the fourth rib on the right, and to the fifth rib on the left side.

CASE 2.—H. K., aged thirty-seven,

butcher, suffering from "asthma" and cough for five years; repeated hæmorrhage from the lungs within the last three years, no appetite, slight emaciation; right lung normal, upper part of left lung consolidated, in lower portion numerous rales; muco-purulent sputa, feeble pulse. The transfusion of eighteen ounces of lamb's blood (June 9th,) was followed by an improved appetite, and better feeling; he spent the summer and fall on a farm, and returned home this month greatly emaciated, with a dry frequent cough, and the tubercular deposits in the left lung extending down as far as the angle of the scapula.

CASE 3.—Mrs. W., aged thirty-two, in seventh month of pregnancy, was so anæmic, as to faint several times during one day; pulse exceedingly thin, urine contained slight traces of albumen. The transfusion of sixteen ounces of lamb's blood (June 16th,) did not even temporarily benefit the patient; her urine showed large amount of albumen for several weeks following the operation.

CASE 4.—N. W., aged thirty-seven, laborer, in the last stage of consumption; extensive cavities in the right lung, and consolidation of the upper half of the left lung; dyspnœa, extreme emaciation, night sweats, copious discharge of greenish yellow sputa, no appetite, no sleep. June 21st, transfusion of sixteen ounces of lamb's blood, followed by an improvement of appetite, and subjective feeling; on July 31st, the state of the lungs was unchanged, and since that time the patient was lost sight of.

CASE 5.—C. F. V., aged forty, cigar dealer, opium eater and consumptive; exceedingly emaciated; feeble and quick pulse; sallow complexion; copious expectoration of greenish yellow sputa; cavity in the upper half of the left lung, and consolidation of the lower half, with an ill-defined respiratory murmur; also, tubercular infiltration of the upper part of the right lung as far as the fourth rib. Sixteen ounces of lamb's blood were transfused on July 1st, and a week later a striking improvement of his complexion and appetite could be noticed; but did not last long. An ultimate examination made October 17th, discovered a marked progress of the tubercular disease; had lost five pounds since operation.

CASE 6.—Fr. H., aged twenty-nine, blacksmith, was taken with pleuro-pneumonia in spring, and laid up ever since. No appetite; weak, feverish, emaciated, constantly coughing and raising a large amount of puriform sputa. The respiratory movements of the left side were very faint, and all over the left lung there was a dull percussion sound, with loud bronchial respiration in the upper half, and remote ill-defined murmurs below the fourth rib. Right lung good. After fifteen ounces of lamb's blood had been transfused, (August 1st,) the patient slowly improved, so that by October 22nd, he had gained eight pounds in weight, coughed very seldom; the sputa were scanty and simply mucous; breathing easier, the expansion of the left lung stronger; the dullness and bronchial respiration limited to the posterior upper part of the left lung.

CASE 7.—Chas. H., aged thirty-eight, farmer, very anæmic, complaining of palpitation of the heart, sleeplessness, cold feet, and inability to do any work; no organic disease could

be found. On August 22nd, he received twenty ounces of lamb's blood by direct transfusion; the urine first bloody, afterward albuminous had to be drawn by means of the catheter for seven days. Patient complained of headache, dizziness, numbness of hands, and was unable to walk; he gradually failed, and died three weeks after the operation. By a post mortem examination, an acute inflammation of the kidneys, and a great number of small hæmorrhagic spots all over the brain, and in the dura mater were found.

CASE 8.—Mrs. K., aged ——, had a very severe hæmorrhage four weeks after a forceps delivery. After the bleeding was successfully arrested, twelve ounces of lamb's blood were transfused (August 30th,) into the patient, whose limbs were cold and pulseless. She at once revived, and by a liberal diet, made a quick recovery.

CASE 9.—N. W., aged thirty-two, farmer, anæmic and weak, so much so, that walking across a room exhausted him completely; except a slight dullness over the apex of both lungs, nothing abnormal could be discovered. A transfusion of eighteen ounces of lamb's blood (August 15th,) produced a marked improvement; he grew stronger, so as to take long walks. But two months later he began to fail again, and gradually relapsed into the status quo ante.

The above statement shows that we have operated five times for phthisis, three times for chronic anæmia, and once for hæmorrhage, with this result: that the operation was a failure in six cases, (1, 2, 3, 4, 5, 9); it caused the death of one patient, (7), and two patients only (6 and 8) were permanently benefited. Our experiments, therefore, do not corroborate Dr. Hasse's observations, although some of our patients offered the most favorable conditions for a good result (cases of simple anæmia). All the patients experienced an improvement of their feeling and appetite, for the four to six weeks following the transfusion. This temporary benefit, together with the good result obtained in the case of hæmorrhage, might speak in favor of performing the operation in cases of profuse loss of blood. Here an instantaneous supply of blood will remove the immediate danger, and allow the body to reproduce its own blood by the time the transfused lamb's blood is exhausted. But will a lamb, or any other suitable animal be at our disposal, just when we want it in such cases of emergency? shall we not find it easier in such cases to get a few ounces of human blood, and to perform the indirect transfusion?

But there are other facts, which just as strongly as our experiments, speak against the probability of permanently benefiting human beings by a transfusion of animal blood.

PROF. LANDOIS, (Greifswald, Germany,) transfusing one animal with the blood of a different species, (e. g., rabbits with the blood of sheep), found that the serum of the blood of one animal dissolved the blood corpuscles of other animals; portions of the blood taken at different intervals after transfusion, showed the corpuscles in all stages of dissolution; the hæmoglobin of the destroyed cells was disposed of principally by the kidneys (*Am. Jour. Med. Sci.*, Oct., 1874). And this accounts for the so-called "bloody" urine discharged after transfusion.

PROF. PONFICK, (Rostock, Germany,) could examine the blood of a woman who died twenty minutes after the transfusion of lamb's blood. He found her blood full of small yellowish elements, the largest of which were two-thirds the size of human blood-cells, and then there were smaller ones of all grades down to the finest granules. The shape, color, and chemical reaction characterized these bodies as blood-cells on a reduced scale; besides these, there was the regular number of normal human blood corpuscles, which were larger by one-third than the lamb's blood cells. Debris of red corpuscles were found enclosed in the white cells (*Berl. Klinische Wochenschrift*, 1874, No. 28).

What Landois demonstrated on animals, Ponfick's observation thus fully verified on the human blood; the introduction of foreign blood leads to a dissolution of red corpuscles, and most likely of those of the foreign blood, and the material of the destroyed cells simply serves as food for the white blood corpuscles. This accumulation of nutritive material in the blood, is the only way by which the transfusion of animal blood can benefit a human subject, and it also accounts for the temporary relief our patients have experienced shortly after the operation. But as there is no probability that the foreign blood cells will ever assume the physiological properties, and discharge the physiological functions of human blood corpuscles, it is impossible to permanently replace any want of human blood by the transfusion of lamb's blood.

DISCUSSION.

The subject of the paper was then briefly commented upon by Drs. Paoli, Adolphus, Earle, and others.

At the request of the society, Dr. Gradle (Interne Physician at Mercy Hospital), made a short statement regarding a case of supposed catalepsy, now in the Mercy Hospital. Several members present who had seen the case, expressed their views regarding it. Dr. Hotz thought the patient was insane, and only feigning unconsciousness. Dr. Earle considered it a case of Hysteria.

On motion, the society adjourned.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, DECEMBER 14, 1874.

Reported by Ralph E. Starkweather, M.D.

DR. BARTLETT, President, in the chair. Dr. P. S. Hayes read a report of two cases of Amenorrhœa, which had been treated in the Woman's Hospital of the State of Illinois.

AMENORRHŒA.

The first case was one of amenorrhœa from infantile uterus and ovaries, and was treated by dilatation, local applications and electricity.

History.— Mrs. H., colored, twen-

ty-three years of age, came under observation June 7th, 1873. Has always been of delicate constitution, and suffered from numerous ailments. Her first menstrual period occurred when she was seventeen years of age. Since that event, at irregular periods, there has been a slight sanguineous discharge from the vagina each month, she has had a return of pain in the back, limbs and head, accompanied occasionally by epistaxis — she is habitually constipated.

An examination made by Dr. A. Reeves Jackson, disclosed an infantile uterus. The sound passing into the uterus measured only three-fourths of an inch; neither ovary was distinguishable.

Treatment. — The uterus was dilated by means of the sponge tent which, however, gave rise to a slight peritonitis. The depth of the uterine cavity had been increased to one inch.

During the period of treatment, there occurred a sanguineous discharge from the vagina.

After an interval of five months, she resumed treatment, and Dr. Hayes employed the Faradic current, passing it transversely through the pelvis. Afterwards the galvanic current from fifteen elements was employed in conjunction with the Faradic. Improvement was only very slight, and then both currents were applied to the canal and cervix. After twenty-four applications of electricity, the uterus appeared to be in the same condition as at the commencement of treatment.

CASE II. Amenorrhœa occurring after menstruation had been established, cured by the use of electricity.

Mrs. B., colored, twenty-seven years of age, began to menstruate at the age of fifteen, and was married at eighteen. Since her marriage, her health became much impaired, and her catamenia irregular both in respect to time and quantity. Three or four months frequently intervened between them. She has never been pregnant. She complains of an irritating leucorrhœal discharge and of pain in the head and in the mammary and ovarian regions, and of a frequent and painful desire to micturate — bowels constipated.

On examination by Dr. Jackson, it was found that the uterus was in its normal position, cervix a little elonggated, the os was somewhat nodular, and had a tenacious mucous plug projecting from it. The sensitiveness of ths vaginal walls was abnormal. The breasts were long and flabby.

Treatment — A pill of aloes and myrrh, and electricity. Dr. P. S. Hayes applied the Faradic current, continued through ten minutes, as follows: One of the electrodes was placed alternately over each ovary and the uterus, the other electrode over either sacro-iliac synchondrosis, the current being frequently reversed, making the electrodes alternately positive and negative. The treatment was followed by a return of the catamenia, at first scanty and lasting for one day, the last two each continued three days and were quite normal in every respect; the disagreeable subjective symptoms had gradually disappeared. Twelve applications of electricity, similar to the one above described, had been given.

Dr. F. H. Davis read from advance sheets of THE MEDICAL EXAMINER a report of two cases under the care of Dr. N. S. Davis, of obscure nervous disease.

THE

MEDICAL EXAMINER.

A

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EDITED BY N. S. DAVIS, M.D., AND F. H. DAVIS, M.D.

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Original Communications.

BIOLOGY.

A PAPER READ TO THE EVANSTON PHILOSOPHICAL SOCIETY, DEC. 29TH, 1874, BY N. S. DAVIS, A. M., M. D., ETC.

THE word *Biology*, was first introduced into common use by Treviranus at the commencement of the present century.

It means literally, a discourse on life; and is now very generally used to designate that branch of science relating to the origin, development and phenomena of living matter.

By some it is used as synonymous with physiology.

It would be better, however, to restrict the word to its original application, as indicating an inquiry into the origin and essential properties of matter capable of manifesting the phenomena of life.

Through all the past ages of literature and philosophy, few topics have been more fruitful in eliciting discussions, observations and experiments, developing a great variety of facts and theories, and yet without a satisfactory adjustment of the latter to a full explanation of the former, than the one under consideration.

In a paper recently read before this Society, it was stated, substantially, that the universe consists of *matter*, *force*, and mind or spirit; the two former essentially passive, the latter alone capable of spontaneous or self-action. But strictly speaking, is there any such thing as *force*, except as a condition or property of either matter or mind? Aside from the operations of mind, can we find any proof of the existence of *force* except as a property or condition of matter? To speak of *force* as one of the distinct entities of the universe, parallel with matter and mind, but distinct from both the latter, appears to me erroneous. Neither can I conceive of such

a thing or idea as *passive force*. The ideas properly conveyed by the two words are antagonistic, and therefore not capable of correct application to the same thing at the same time.

Yet we not only meet at every turn with expressions clearly conveying the idea of *force* as a separate entity or subject of thought, but also representing it as a fixed quantity in the universe, appearing in different forms or modes of action, but never annihilated. For instance, a ton of coal is said to contain a certain amount of *force*, meaning thereby, that under certain circumstances in connection with oxygen, it would be capable of developing a certain amount of that peculiar *mode of motion* in matter termed in common language, *heat*.

As a figurative expression it would be generally understood correctly; but is it scientifically correct? Has the ton of coal in reality any force except its specific gravity and the cohesion of its atoms? That it has the capacity, when its temperature is properly elevated, to enter rapidly into combination with oxygen, and by such union, so to increase the movements in the atoms of matter as to constitute a given amount of force, is true.

But the *capacity* to develop force under certain conditions, is not itself force. As well might we say an egg is a hen, or the germinal cell of the ovum, a man. It is proper to say, that a ton of coal and a certain quantity of oxygen are capable, by their union, of developing a certain amount of force.

The *force* itself exists only while the union is taking place.

The capacity to develop the force in some other form may still remain, because neither the oxygen nor the carbon is annihilated by their union. As the so-called cosmic forces of the material world, heat, light, electricity, attraction, etc., are simply exhibitions of material properties and modes of motion, and as no atom of matter is annihilated by simply changing its relation to other atoms, it is proper to say, that the *capacity* for evolving these forces in connection with the material universe is, in the aggregate, always the same. But while the capacity to evolve force is the same, the amount actually being evolved varies with each passing hour. My object in presenting these preliminary remarks, is to invite attention to the necessity, especially in scientific and philosophical discussions, of more exactness in our modes of expression, that we may avoid vagueness and confusion of thought, and the conveyance of imperfect or erroneous ideas. And in no field of inquiry is this caution more necessary than in that pertaining to the study of living matter. For here, more than elsewhere, the word *force* has been used in the most vague and latitudinous manner.

The ancients had their vis vitae, vis anima, vis generatrix, vis medicatrix, vis conservatrix naturæ, etc., which they used on all needful occasions to explain whatever to them was otherwise unexplainable. So also at the present time, writers assume the existence of a vital, biotic or life *force;* a neurotic or nerve force; a myotic or muscular force; a reparative or conservative force, etc., and invest these respective forces with whatever attributes or powers are necessary to serve their purposes. If we interpret the language applied to them literally, we find them not only invested with individ-

uality and intelligent action, but also with many of the qualities of matter, such as quantity and motion. For instance, it is common to hear certain articles of food and drink spoken of as capable of conversion into life force or nerve force; to hear these forces spoken of as capable of increase, accumulation and exhaustion.

Again, the vis conservatrix or reparative force, in medical literature especially, is invested with the most remarkable attributes. The expressions used, not only imply a separate and independent existence, but also the highest order of intelligent action; a veritable goddess enthroned in the living body and capable of acting in every direction to guard the citadel of life. It has seemed to me that the assumption of the existence of forces not capable of proof, and the investment of them with just such attributes and capabilities as our fancy might deem necessary, was not only unphilosophical, but greatly detrimental to the progress of true science. That there are specific and absolute differences that distinguish living from dead matter, is too obvious to need illustration. Both, however, require to be studied in the same manner, and with an equally careful adherence to observed facts and inductive laws. If we take up a piece of inorganic matter for investigation, we analyze it to find the kind of matter of which it is made; and we note its shape, density, and particular arrangement of its atoms, to determine the properties by which they are held together. If we pursue the same course in regard to living matter we shall arrive at results equally satisfactory. That there are certain properties peculiar to, and inherent in all organic matter, so long as it retains the capacity to exhibit the phenomena of life, is evident from facts familiar to us all. Take for example the simplest form of organization, the germinal cell of the ovum, or the chit or germinal part of the seed. Each is destitute of all trace of either capillary vessel or nerve, yet each is susceptible to the impression of certain exterior agents or influences, and whenever these are applied, a series of regular and determinate changes commence, constituting the active phenomena of life. It requires but a moment of careful logical thought to recognize here the existence of two inherent elementary properties. One imparts to the cell or mass of bioplasm the capacity to receive impressions, and hence I have called it *susceptibility*. The other causes the atomic changes that result from the impressions received, to follow certain laws, both in the addition of new atoms and the liberation of old ones; and I have, therefore, called it *vital affinity*. *Susceptibility* and *vital affinity* are the elementary properties of all organized living matter. It is the possession of these properties that gives to the protoplasm of Mr. Huxley, and the bioplasm of Mr. Beale, all their peculiarities and capabilities of development.

It would be a waste of time to speculate as to the nature of these properties. They constitute the peculiar and elementary forces of the organic world, and can be recognized and studied only by their effects, in the same manner that we recognize and study heat, electricity, attraction, as elementary forces of the inorganic world. You suspend two inorganic substances in water, and if they unite,

forming a new material, you say the union was the result of a property in the combining bodies which you call chemical affinity. You do not see the property or force, yet for that reason you do not doubt its existence. So if we place the germinal cell of the animal or vegetable in certain relations we find its atoms uniting with other atoms of matter, and forming not a new and homogeneous compound, as in the display of chemical affinity, but a complex and progressive series of additions constituting growth or development; and we call the property in the germinal cell by which these changes are effected, *vital affinity*. These properties, susceptibility and vital affinity, are elementary and inherent in all organized living atoms of matter, whether vegetable or animal. Deprive the germ of either or both of these properties and it immediately becomes subject to the same laws that govern inorganic matter. Expose it to warmth and moisture, ever so sedulously, and instead of the phenomena of life, you have only those of disintegration and decay.

It has been claimed by some, that these properties of living matter are simply correllations of those controlling inorganic or dead matter. But they are so radically different, both in origin and modes of action, as to defeat all attempts to trace their identity with either heat, electricity, or any of the varieties of attraction. For instance, chemical affinity causes the atoms of matter to unite in certain definite proportions, and the union thus formed to remain stationary; while vital affinity, once called into activity, continues its influence over the atomic or molecular changes through periods of time more or less definite, inducing combinations and decompositions in successive order until a certain result is reached. Again, the properties of inorganic matter are universal in their presence, being capable of detection in all forms of matter, organic and inorganic, while susceptibility and vital affinity are manifested only in matter the molecules of which have assumed a definite arrangement under the influence of some prior organic body.

In other words, there are no known circumstances under which the molecules of inorganic or of organic matter *spontaneously* unite in such a manner as to exhibit the properties of living matter. I am aware that Pouchet and others claim to have demonstrated by experiments, that some of the infusoria, as vibriones and bacteria, are capable of originating spontaneously in solutions containing organic matter from which all prior germs or spores had been excluded; but other equally careful experimenters have arrived at opposite conclusions. And it only requires a glance at the progress of the science of life during the last two centuries to be satisfied that there is no such phenomenon in nature as spontaneous generation.

In the days of Aristotle, many fishes, reptiles, worms, and all insects were thought to originate spontaneously. Hardly had this error been corrected in regard to these several species, by the discovery of their ova, when the numerous varieties of Entozoa began to attract attention as animals springing, de novo, from the simple aggregation of organic molecules. The appearance of maggots in meat, larva in cheese, and worms in the alimentary canal, were very

generally regarded as specimens of spontaneous generation, until the experiments of Redi, in 1668, demonstrated the facts to be otherwise. It was then thought that the axiom of Harvey, "Omne Animal ex Ovo," was of universal application. But only a few years later, 1675, the discovery of animalcules or infusoria in water and other fluids, by Lieuwenhoek, opened a new and extensive field for observation; and at a later period gave rise to a renewal of the discussions concerning spontaneous generation. The invention of microscopes and their application to the study of these innumerable species of minute objects in air, earth, and water, have enabled us already to trace the propagation of many of them by the evolution of ova, spores or germs, and others by segmentation and budding, leaving at the present day only a very few of the most minute living organisms undetermined in their mode of propagation. Even Pouchet claimed to find in his solutions the spontaneous appearance of only two or three varieties, namely, the vibriones, bacteria and nonads.

If it is true, however, that during the last two centuries the progress of exact or experimental science has driven the advocates of spontaneous generation from worms and insects, down to two or three of the most minute varieties of the infusoria, we are fully justified in assuming, that further progress by the same methods will rob them of even those.

The Harvenian axiom, that all animals spring from eggs, and all vegetables from seeds, is not strictly correct. For we find some of the more minute and simple organizations of both animal and vegetable nature, to propagate their species by simple division or segmentation, instead of ova.

Without dwelling further on the modes of propagation, we simply assume the position that all organized living matter is possessed of the two properties heretofore named, susceptibility and vital affinity, and that these properties, together with the special aggregation of molecules in which they inhere, are in all instances derived from a prior living parent. Hence, both the special molecular arrangements and the specific character of the properties governing them, must be identical with those of the parent from which they were derived. And as all the molecular movements constituting nutrition, growth, and metamorphosis or disintegration in living matter, take place under the direction of these properties, it follows as a logical necessity that every bud, segment, or ovum, will follow in its development through all stages from the simple germinal cell to the most complex animal, the special type of the parent from which it was derived. If the parent was a simple aggregation of bioplasm, constituting a nonad or vibrio, with neither recognizable vessels or nerves, the propagating segment will develop into the same simple structure and nothing more.

If the parent is a vertebrate with vessels, nerves, muscles, and all the complex organs of the higher orders of animals, the germinal cell of the propagating ovum will contain molecules or atoms of bioplasm, representing each typical structure of the mature animal, and under the guidance of these elementary properties, will develop in the same order and reach

the same complex maturity. So exactly do the properties of the germ represent those of the parent, that when the latter have been materially altered by disease, the former partake of the same modification and thus transmit the disease hereditarily from one generation to another. If these propositions are true, it follows that the Darwinian idea of progressive development from a lower to a higher order of living beings, by the gradual change of one species, order, or genus of plants or animals into another, is contrary to a fundamental physiological law of living matter. That the elementary properties of which we have been speaking, are capable of being modified in their operation by the influence of exterior agencies, mental and physical, is true. But such modification is limited to simple increase or diminution of activity, or to defective supply of material, and consequently shows itself, not in a change of the type of organization, but only in the degree of perfection attained in the processes of growth.

The so-called law of the "survival of the fittest" or strongest, may apply to the individual members of each species, but cannot be extended in such a manner as to transform the "fittest" of one species into the most unfit or "weakest" of another species. There is no plainer or more persistent law recognizable in the material world, than that like begets like, through all grades of living objects. Not only does this physiological law, founded on the origin and nature of the properties controlling all the molecular changes in living matter, negative the idea of progressive development of one species into another; but the radically different anatomical plans on which the different general divisions of the animal kingdom are based, renders the development of one into another, a physical impossibility. For instance, the more perfect the growth or development of an animal constructed on the plan of a radiate, the further will it become removed from one constructed on the plan of a mollusk, an articulate, or a vertebrate Neither can any possible perfection in the growth of an animal constructed on the anatomical plan of an articulate, bring it into proximity to the construction of a vertebrate.

The same thing is shown in the radical differences in the modes of development in the ova or germs of each division of the animal kingdom.

If, as we have intimated, every aggregation of molecules constituting a vegetable or animal germ, capable of manifesting the phenomena of life, is derived from a living parent, and possessed of such elementary properties as will guide each successive molecular change in a direction to make the resulting plant or animal of the same type as the parent, it must be inferred that every such germ contains at least one molecule typical of each primary structure found in the mature plant or animal.

It might be thought that this would necessitate a large number of typical molecules in the germ, especially of the higher orders of animals. A closer study, however, will show that only a few really typical or elementary structures are required for the complete development of the most complex of all animals, man. All vegetables and the lowest species of animals, present but a single structure, consisting of cells variously arranged, and exhibiting no other functions than those of

assimilation or growth and elimination or excretion. As we ascend in the scale of being, we find added successively, elastic fibrous tissue, capillary vascular, nervous, and muscular tissues. Thus, all the organized living parts of the human body, are resolvable into five primary structures or forms of organization, namely, the cellular or secretory; the elastic fibrous; the capillary vascular; the muscular, and the nervous. And each of these has its own specific function or office to perform. The first imbibes from the materials in contact with it, certain substances, causes their union into new forms either for its own growth or for elimination as a secretion, or for both. The second, simply forms a tough, elastic bond of union, and support for all the other structures. The third consists of capillary tubes adapted to the movement of fluids through them, and to free exosmose and endosmose through their walls. The special office of the fourth is contraction, by which it becomes the active motor force of animal bodies. The fifth possesses the double function of receiving and transmitting impressions. Hence the germ of even the most complex animal, need contain but five typical molecules to represent all the primary structures of living matter. Each of these typical molecules being endowed with the properties, susceptibility and vital affinity, would be capable of responding to the presence of exterior matter, selecting from it the materials for its own development, and rejecting all the rest. But each must, from an absolute law of necessity, follow its own special type. Were this not so, we would constantly find the different structures of the body mixed in inextricable confusion. And yet this necessity for following the typical law of molecular growth presents another anatomical barrier to the theory of evolution or progressive development of one species into another. Through the whole range of anatomical, physiological, and pathological investigations, I am not aware of the discovery of a single instance in which a tissue of lower type of organization has been transformed into one of a higher type. For instance, we never find elastic fibres transformed into capillary vessels; the latter into muscular fibres; or muscular fibres into nerve structure. Whatever apparent transformations of tissue have been observed, have invariably been in the opposite direction, namely, from the higher to the lower form. Having already occupied quite as much time as the Society has allotted to the essayists on these occasions, I will close by stating, that the foregoing observations relate to the elementary properties of all living matter, and to the primary function of each distinct structure, as they are manifested in the various grades of vegetable and animal bodies, and without any reference to the purely mental part of man. The latter, so far as its connection with the material organization can be traced, has its special seat in a portion of the nervous structure, through which alone its operations are made known to us.

REMARKS UPON CATALEPSY, WITH REPORT OF A CASE.

SUBMITTED TO THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS, BY J. H. HOLLISTER, M. D.

GENTLEMEN.—The affection termed Catalepsy, is one so exceedingly rare, and in many of its phenomena so interesting that I deem it hardly necessary to apologize for calling your attention to the subject, and for occupying a few moments in detailing a case which has fallen under my observation, which so far as I am able thus far to study it, *seems* one of genuine catalepsy. This opinion has the concurrence without exception, so far as I know, of a number of medical men, who have been interested in examining the patient, with me, since he entered the hospital.

Few men, even among our medical writers, seem to have much experience from personal observation; some even doubting, but that, among many cases of so-called catalepsy, they had not all been feigned, or were a peculiar manifestation of *Hysteria*. These suggestions have led me from day to day to watch the case all the more critically, lest I should be deceived as to the *facts*.

Catalepsy is indeed so rare, that even Prof. Watson, with all his extended facilities for observation, remarks, "I have never seen a case of perfect catalepsy—which I now regret, as I once had an opportunity of doing so, of which I did not avail myself,"—and in his work, cites quite at length, a case which is quite fully detailed by Prof. Gooch.

Prof. Niemeyer says, "In my description of the symptoms and course of catalepsy as an independent disease, I must rely entirely upon the representations of others, since all the cases which I have had an opportunity of observing personally have inspired me with the suspicion that they were simulated." Prof. Dunglison in like manner, refers to its rare occurrence, and speaks of a single case in which it had occasional very brief manifestations which had fallen under his observation.

It will be my purpose in few words to give a portraiture of the characteristic symptoms of catalepsy, and with this compare the appearance and symptoms of my patient as they have been noted from day to day, and I shall ask you gentlemen to sit in judgment upon the question of its genuineness.

Blazius classes catalepsy with the neuroses of stability. During the *fit*, the limbs remain stationary in the position assumed before the attack, or in that in which the attendant has placed them, and are not susceptible of change so far as can be judged by the will of the patient. In a quiescent state, the muscles do not seem in violent contraction, in fact, slight motion is easily accomplished *but* only to a very limited extent, for the moment anything like free movement of any portion of the body is attempted, the rigidity of the muscles is very like that of a person when endeavoring voluntarily to oppose the motion you seek to make, only more *steady*,

and for almost any length of time persistent, without the tremor which invariably appears when the muscles are for a long time upon severe strain in obedience to the will.

Besides the loss of voluntary motion, there is also a suspension of both *thought* and sensibility. If not, if the consciousness and sensibility be retained, there is no power by word or sign to indicate their continuance.

There are instances of partial catalepsy, when motion and sensibility were *lost*, but consciousness was not suspended; but in cases of typical catalepsy, the patient upon recovery has had no consciousness of sensations nor position. And all these strange phenomena while the functions of organic life were either not at all or but slightly interfered with.

That sensibility is lost, seems evident in that there are not the manifestations of pain which find even involuntary expression when there is pinching, pricking, cutting or burning of the surface of the *body*. The hearing seems lost, and the pupil of the eye responds to the stimulus of light.

The duration of the attacks are often for a few moments, and are sometimes induced by what is termed animal magnetism. Sometimes they are present for a few hours, and then pass away; in cases more rare they are persistent for days.

In respect to duration of attack, the case I am now to relate exceeds any of which I find record.

With reference to the causes which produce catalepsy, a word should be said as this has a bearing upon the case before us. Unusual impressibility of the nervous system, from whatever cause, seems to be the predisposing condition, and it is most frequently complicated with hysteria. It is the sequel of marked inebriety and of insanity. Such are the conditions in which, under the excitement in a powerful manner of the emotions, the person passes into this strangely unconscious state.

I will now proceed to detail the more obvious symptoms and conditions of my patient, reserving for a future paper such observations upon the nervous state as the limits of this article will not permit.

CASE—Michael Finnigan, a laborer, a native of Ireland, 28 years of age, 5 feet 10 inches in height, 38 inches in chest measurement, of good muscular development, but rather spare of habit, weighing about 140 pounds, with fair skin, dark hair and whiskers, and of well-developed nervous temperament, was admitted to Mercy Hospital, Nov. 4, 1874.

We glean from imperfect sources the following brief history: He had been a healthy, hard-working man. For eight years he had drank liquor to excess. During the last year he had left it off, using in place large quantities of very strong tea.

It is said that he left off work in a slaughter-house, a year ago, on account of disordered nerves.

His mother says, that at times he behaved himself very strangely, and was, as I think, in some measure insane. Some eight weeks before his admission, he became in some degree unconscious, but did not fall, recovered himself so far as to reach the house of an acquaintance, with difficulty; became more and more helpless; was remembered to have answered but a single question during that evening, and now so far as I can learn, for a

period of nearly *three months*, has been entirely speechless. The condition of the patient from day to day has been noted by my assistant, Dr. H. Gradle, to whose notes I make reference, the statements of which are verified by my own daily observation.

The patient's condition at the time of entrance was that of pretty good health, there being but little appearance of emaciation. Skin warm, moist, pliable, and frequently slightly bathed with perspiration. The temperature per rectum, 99.8. Pulse varying from 65 to 78. Heart sounds nearly natural, but rather feeble. Pulse full; soft; easily compressible. Respirations almost entirely abdominal, and 13 per minute. Mouth firmly closed, and facial muscles fixed and rigid. Eyes closed for hours; occasionally a tear coming over the face from the external canthus—a quick blow upon the nose or forehead would produce the semblance of winking. Globe of the eye mostly turned inward and upward, remaining fixed for long periods of time, the pupil *contracting* somewhat under powerful stimulation. The muscular system seems rigid in every part, save in the motion of the *eye-lids*, and these seem never under the control of volition. The muscles at first yield slightly under pressure, and then powerfully resist farther movement. With considerable force, say of twenty or twenty-five pounds pressure, the upper extremities may be flexed in any direction, in which they are susceptible of motion, and will then remain as placed for almost any period of time—even for hours; and an equal force would be required to return them to their former position. The body can be suspended in nearly a straight line for quite a period of time, by lifting the feet and occiput. The lower extremities raised to an angle of forty-five degrees from the bed, require from eight to ten minutes to gravitate to the level again. The muscles of the mouth are only overcome with much force; and when relaxed, the mouth remains fixed and open for a time. Buccal secretions are natural. Tongue moist and natural. Mucous membranes indicate perfect aeration of the blood and normal secretions. No methods devised by heat, tickling the fauces, inhalation of vapors, currents of electricity, or stimulating or irritating applications, gave us any evidence of consciousness. Such was the state of the patient on the 4th instant, when he was brought to the hospital.

Nov. 23. The patient has now been under my care for nineteen days, and during that time, I have been able to note or learn from the interne, the following facts:

1st. *As to the motions of the body.*—Usually, once in twenty-four hours, he will turn upon his side in bed, and has twice placed his hand under his head. Slight motions of the extremities may be accomplished at will by the attendant, but any decided flexion or extension is always accomplished with difficulty. When the rigidity is overcome by *force*, the part remains as firmly fixed in the position to which it is compelled, as in that from which it was removed. If in any part there is relaxation, it is only for a moment or two, when the wonted rigidity is again assumed. This is especially true of the eyes. Twice in the nineteen days has he been known to slightly raise his head, and look

round as though he were conscious, and then again to pass into the same rigid state. When sustained alone by the head and feet, the thighs slowly *flex* upon the pelvis, and there is a facial expression indicative of pain. The body thus flexed to an angle of forty-five degrees, was laid upon a hard couch upon the floor. The head and chest began very slowly to sink to a horizontal position, and were ten minutes by count in reaching the plane, and this without twitching or tremor, or other evidence of muscular exhaustion, other than the acceleration of the pulse and respiration. Placed in an upright position and left to himself, the body obeys the laws of gravitation without any evidence of volition on the part of the patient. Sustained in an upright position, the legs gradually flex, and the body settles to the floor. When their weight is not sufficient to overcome the rigidity of the muscles—as for instance, the hands and fore-arms—they remain in a given position for an almost indefinite period.

2d. *Color of the Body.* — The patient is usually a little paler than natural, although a blush frequently comes over the surface as in health. The cutaneous capillary circulation is nearly natural; the skin soft and natural; the superficial heat about as in health.

3d. *Temperature.*—The bulb of the thermometer in the mouth, the registry averages 98½; in the rectum, 99.

4th. *Respirations.*—The general average has been from 13 to 16 per minute. When the body was *flexed* and left, head and extremities unsupported, and they were gravitating to a level, the respirations rose to 24 per minute. The respirations are nearly absolutely abdominal, as the elevation of ribs and sternum is imperceptible.

5th. *Circulation.*—The beating of the heart is natural, but rather feebler than should be in health. Sounds all natural. Pulsations average from 65 to 78, sometimes running to 100 when being moved, and at one time to 124 when inhaling ether.

6th. *Nutrition.*—The method of feeding since his entrance to the hospital, has been by inserting an œsophagus tube; and when in position, connecting with a fountain syringe—and by this means, introducing regularly, three times each day, a sufficiency of milk, eggs, and *beef-tea.* There was no evacuation of the bowels after his entrance to the hospital for ten days, when there were free movements of solid fæces of natural color and appearance; and another twelve hours later, since which time, the evacuations have taken place every two days, with some evidence of tenesmus.

7th. *The Urine.*—This has been carefully drawn on different days, so as to ascertain accurately the amount secreted. When not drawn, it is usually voided from three to six times in twenty-four hours, the average amounts varying from twelve to twenty ounces. It has a healthy appearance; contains a little mucus, specific gravity of 1028, and yields neither albumen nor sugar, and is acid in reaction.

8th. *Behavior Under the Influence of Ether.*—The patient has been twice anæsthetized; the first time by Dr. Gradle, who reports a temporary and complete relaxation of the muscles, followed in a few moments by the usual rigidity.

To-day, I caused him to inhale

ether for fifteen minutes, with the following results:

At the end of that time, there was partial relaxation of the muscles—thoracic respiration was established, and full, deep inspirations, with elevation of the *ribs* and *sternum*.

The eyes opened as when one awakes from sleep, and were turned to different persons as if fully conscious. He shrank from the threatened snapping of the nose, and performed the only seeming voluntary motion which I have witnessed in the nineteen days, when he raised his hand and removed the napkin which was saturated with ether, and was laid upon his face. His head was slightly raised, and he seemed to look round the room as if *bewildered*. The surface was now flushed and warm; temperature 99 internally. Respirations increased to twenty-four per minute, and the pulse ran up to 124. Inhalation of ammonia and sulphurous acid gas, showed irritation of the nostril. As the etherization passed off, he sunk again, in all respects, into his former state.

Effect of Electricity.—The galvano-Faradic current was now tried, as strong as the attendant could well tolerate, with marked *effect*, in contraction of the facial muscles as it was applied over the seventh nerve; so upon the cervical region and the hand. The spinal muscles responded to the application to the cervix and sacrum.

Experiments were continued over different regions of the body, till the fact of response of the muscles to the stimulus of electricity was fully established, but their tonicity was in no wise diminished by its application.

The pupil of the eye also readily contracted under the stimulus of electricity applied to the temples, the same as with a bright light.

Blood flowed moderately freely under the act of wet cupping, and readily coagulated, and had a healthy appearance.

Under the microscope, the disks appear well formed, and the white corpuscles have their relative percentage only.

The patient has now been in this condition about *seventy* days, and what shall be the result, time only can determine. I have thus far sketched what may be termed the gross appearances of what is clearly a case of complicated catalepsy.

Jan. 1st, 1875. P. S.—Since the above report was submitted, the patient has so far recovered the use of his muscular system as to feed himself. The consciousness of what had passed is partial, and the power of sensation becoming again apparent.

THE PREVENTION OF ZYMOTIC DISEASES.—Dr. Lyon Playfair, in his address as President of the Health Section of the British Social Science Association, says: "The isolation of patients afflicted with small-pox, scarlatina and measles, will one day become part of hygienic law, though at present it would not be supported by public opinion."

THE ORIGIN OF TRANSFUSION.—According to reliable records, transfusion was first practiced, in 1492, upon the person of Pope Innocent VIII. The operator was a Jewish physician. The experiment was tried three times. The result of the treatment was that the blood-donors, three in number, died, as well as the decrepit pontiff himself.

Clinical Reports.

MERCY HOSPITAL OPHTHALMIC CLINIC.

SERVICE OF PROF. S. J. JONES, M.D.

Reported by F. J. Huse, M.D.

I.

TR. H——; thirty-three; blacksmith's helper; healthy, and of temperate habits; while breaking off the end of a bar of iron, was forcibly struck in the left eye by a fragment weighing about two ounces. A jagged angle penetrated the cornea at its outer and lower margin, freely lacerating the iris and the capsule of the crystalline lens. Another sharp projection inflicted a wound in the sclerotica, through which a small portion of the pigmental layer of the choroid may be easily distinguished, owing to the gaping produced by the increased interocular tension.

Four days subsequently he makes his appearance, complaining of very severe supraorbital pain, great tenderness of the eye, and complete obstruction of vision, consequent upon traumatic cataract. The eyelids are ecchymosed, the conjunctiva is highly injected, and there is a bright red zone around the margin of the cornea. At the point of the corneal wound, there is an irregular conical bulging over a line in height and two lines in diameter, through the truncated apex of which there is hernia of the iris. The anterior chamber is very nearly filled with portions of the opaque lenticular substance, and the capsule is adherent to the upper and inner margin of the iris for a space nearly three lines in length.

There is ordered to be dropped into the eye, once daily, a solution of atropia (sulphate), five grains to the ounce of distilled water, for the purpose of dilating the pupil as widely as possible away from contact with the lens, and diminishing the ciliary disturbance. In addition, the patient is directed to use a collyrium containing two grains of zinc sulphate to the ounce of distilled water, and to make frequent applications to the lids, of thin pieces of muslin wet with cold water; at the same time, his bowels are to be kept freely open.

Oct. 14th.—There has been a subsidence of the pain, and under the influence of the atropia, the pupil has become irregularly dilated. Notwithstanding an improvement in the iritis, the capsule of the lens remains adherent to the posterior surface of the iris; the flakes of lenticular substance are being slowly absorbed, the hernia of the iris is lessened, but the eye is still inflamed and sensitive.

Oct. 21st.—An improvement has taken place in the general condition of the eye; and absorption of the opaque lenticular matter is occurring, especially in the outer portion of the pupil, so that the patient can now count fingers at the distance of three feet.

Dec. 1st.—Only a very small amount of lens matter remains in the anterior chamber, and the border of the iris has been gradually detached from the capsule of the lens, so that its outline is now perfectly natural, except at the point where hernia occurred. The hernial projection has been slowly diminished, until it is scarcely perceptible. A portion of the lens still occupies the posterior chamber, but vision is growing much clearer, and the process of absorption will continue until the removal of the entire lens shall have been effected; thus the injury which produces cataract, also affords the means of its removal. The admission of the aqueous humor, at first rendering the contents of the capsule opaque, promotes its final dissolution.

II.

S. R. M——; has severe pain, and considerable tinnitus in the right ear, from which she has been suffering since her exposure eight days ago, to a severe storm. Removing the numerous wrappings about her head which have been assisting the inflammatory process by keeping the parts hot and promoting decomposition of the discharge, the patient presents an example of those cases in which inflammation of the meatus is aggravated by the nature of the dressing. The entire auricle, which has been repeatedly smeared with goose oil and common salt, is much inflamed and excoriated. The meatus, which has been kept plugged with cotton saturated with the same compound, is narrowed concentrically throughout its entire extent; the tissues are œdematous and exceedingly tender; and the surface almost entirely stripped of its epidermis, looks red and roughened. After cleansing the meatus by syringing, the membrana tympani is found to be greatly thickened and hyperæmic. There is copious discharge. Upon catheterization, the eustachian tube is found to be moderately pervious. There is no inflammation of the fauces.

It is ordered that the parts be kept cleansed by repeated syringing with warm water; that the superfluous coverings be dispensed with; and that the meatus be filled twice daily with the following solution, slightly warmed:

℞.—Zinci sulph., grs. v.
Acidi carbol., (cryst.), grs. ii.
Glycerinæ, f ʒ ij.
Aquæ destill., f ℥ ij.—M.

Leeches are to be applied to the tragus and meatus, if the pain and inflammation continue.

III.

J. D. E——; twenty-seven; blacksmith; was struck in the left eye while engaged in driving a rivet by a small piece of iron, which pierced the cornea, passed through the pupil, and penetrated the crystalline lens. Severe inflammation and traumatic cataract have followed, and now five days after the injury was received, he presents himself for treatment.

Anæsthetizing the patient with chloroform, the lens is extracted by the modified operation of von Graefe; but careful search fails to reveal the presence within it of the foreign body. To obviate the risk of sympathetic inflammation of the other eye, enucleation is performed; and in the posterior portion of the vitreous humor, is found the particle of iron.

Translations.

PROGRESS OF MEDICAL SCIENCE IN GERMANY.

By Edmund J. Doering, M.D.

I. Treatment of Scabies, by Dr. Clemens (*Allg. Med. Central Zeitung*, No. 98). II. Treatment of Epididymitis, by Dr. Calvo (*Allg. Wiener Med. Z.* No. 49). III. Treatment of Whooping-Cough, by Dr. Mascarel (*Med. Chir. Rundschau*, IV B., I Heft).

I.

DR. CLEMENS, on the basis of repeated and careful experiments, considers the following prescription for Scabies as not only more convenient for general use than the numerous remedies now employed, but also as more efficacious:

℞	Acid Arseniosi,	gr. j.
	Potass. Carbonate,	gr. xv.
	Spirit Sapon.	f ʒ ss.
	Aqu. Font.	f ʒ iij.—M.

The carbonate of potassa is added to increase the solubility of the arsenious acid, and also to prevent the too rapid drying of the lotion when applied to the skin. One-tenth part of this mixture is a sufficient quantity for each application, and the patient is directed to rub it well into the skin, at least twice daily. This lotion is quite harmless, for the quantity of arsenic absorbed by the skin is too minute to justify any fears of poisoning, the author having used it even for young children without producing any ill effects, not even derangement of the digestive organs.

II.

This frequent complication of Gonorrhœa is best treated on the following plan: First, apply from ten to twenty leeches to the perineum along the affected side, covering the testicles constantly with warm poultices, to which twenty drops of laudanum may be added. Absolute rest in bed, and abstinence from all stimulating food must be strictly enjoined. Oatmeal gruel forms the best drink for this class of cases. Every other morning the patient is directed to drink two glasses of seidlitz-water. At a later stage of this affection, frictions of the testicles are to be made thrice daily with the following salve:

℞	Ext. Bellad.	ʒ iss.
	Ung. Hydr.	ʒ j.—M.

If hydrocele has developed, causing severe pain, small punctures into the tunica vaginalis with a sharp lancet will be of use. After the inflammation has subsided, and only a swelling of the testicles remains, frictions with the following ointment will be found to be very useful:

℞	Ext. Bellad.	ʒ iss.
	Potass.-iodidi,	ʒ j.
	Adipis.	ʒ j.—M.

The scrotum must be wrapped in cotton and be constantly supported by a suspensory bag. If the swelling persists and seems to depend on the condition of the general constitution,

then gentian with iodine, cod-liver oil, quinine, salt-baths, etc., will be indicated. Emissions of bloody semen becoming permanent, point to an inflammation of the vesiculæ seminales, and therefore demand a separate treatment of these organs.

III.

Dr. M. recommends the following treatment for Whooping-cough:

1. Every morning between five and eight o'clock, the patient receives from a teaspoonful to a tablespoonful, according to age, of a solution of tartar emetic (1 gr. to 4 oz. water). Sensitive children receive ipecac instead.

2. After supper, one-sixth of grain of extract of belladonna is given, increasing the dose gradually to one grain. After the paroxysms diminish in frequency, the dose of the belladonna may be diminished correspondingly. The extract must be pure and produce the characteristic erythema and dryness of the throat. If the general nutrition of the little patient suffers from too frequent vomiting, small doses of morphine may be given every three or four hours, combined with the administration of five or six teaspoonfuls of black coffee after breakfast.

The author has followed this plan of treatment for 18 years, and has invariably diminished the duration o the disease to four and three weeks and even less.

GLEANINGS FROM THE FRENCH.

Translated by Fred. J. Huse, M.D.

IN a note to the editor of *La France Medicale*, Prof. Bouchut calls attention to the use of the ophthalmoscope as a valuable means of diagnosis in traumatic injuries of the brain.

In simple concussion of the brain, the ophthalmoscope fails to indicate the existence of any lesion of either the optic papilla or the retina and retinal vessels. The condition of the fundus is nearly normal.

In contusion, however, followed by encephalitis, and in compression of the brain, the appearance of the fundus affords a measure of the effect produced within the cranium. The papilla of the optic nerve is red, swollen, of a flattened appearance, and more or less obscure and diffuse on account of the hyperæmia of the nerve. It is sometimes the seat of an œdema which extends throughout the neighboring portion of the retina, and gives rise to an acute neuro-retinitis.

In addition, the retinal veins enlarged, flexuous, and sometimes filled with thromboses, thus indicating the difficulty with which the blood reenters the cranium from the fundus; or an effusion obstructing the progress of the blood in the sinuses of the dura mater.

ACCORDING to Dr. Thorowgood, the true active principle of arnica is trimethylamine, which though only slightly soluble in alcohol, is readily extracted by water. An additional fact in favor of an aqueous solution, is its failure to extract an irritant oil, which is usually present in the alcoholic solution.

Editorial Department.

SOCIAL ORGANIZATION AND CO-OPERATION AS A MEANS OF ADVANCING MEDICAL SCIENCE.

THERE are probably but few reading and thinking men in the profession who have not been impressed with the fact, that through all the past, much time and labor have been substantially lost or wasted either in repeating experiments and observations already fully made by others, or in prosecuting inquiries so imperfectly planned and partially executed, as to render the results of very little value.

Our literature is full of facts, observations, and the results of experiments relating to almost every department of medical science, which, from their isolated character or incompleteness, are quite as likely to be made the basis of erroneous conclusions as otherwise.

Very much of this might be obviated, and the scientific interests of the profession much more rapidly advanced, if our social organizations could be rendered more complete, and more intimately united with each other. Many of the most important questions in the department of etiology and public hygiene, can only be answered reliably by a careful comparison of facts observed at many different localities simultaneously, and in accordance with a uniform plan. If members of the profession could be more generally induced to become members of the local, state, and national associations, and all these more perfectly brought into co-operation by uniform representation from the more local in the more general organizations, it would enable measures and plans of investigation of the highest importance to be adopted and carried out on such a scale of magnitude and uniformity, as to ensure the most reliable results.

The present national, state, and local medical societies, already present the form of organization needed; but the state and local societies need multiplying and greatly increasing their membership, thereby including and interesting a larger proportion of the active practitioners in all parts of the country.

This work is steadily progressing—and at the last meeting of the American Medical Association, the work of planning special courses of investigation was fairly begun, both in the section on practical medicine and materia medica, and in that on public hygiene and state medicine. We hope to see this followed closely at the next meeting, and every successive year, until at each meeting of all our state societies, as well as of the American Medical Association, the time shall be mainly occupied in receiving, digesting, and recording the results of well planned original or primary investigations; and the adoption of new plans for the future, instead of listening to long papers or reports compiled mostly from the current periodical literature. One of the results of a movement made

in the section on practical medicine at Detroit is, a proposition before Congress to add to the records of the Signal Service Bureau, the electrical and ozonic conditions of the atmosphere, and to permit the records of that bureau to be used in aid of sanitary science. If the proposition receives the sanction of Congress, it will open the way for a most important advance in our knowledge of the causes of all zymotic diseases.

Society Reports.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, DECEMBER 28, 1874.

Reported by R. E. Starkweather, M.D.

THE society met as usual in the Grand Pacific Hotel, the President in the chair. The minutes of the preceding meeting were read and approved.

Dr. W. C. Lyman proposed the name of Dr. O. C. De Wolff, (Howard Medical School) for membership.

Dr. J. H. Etheridge then reported a case of dysmenorrhœa, relieved by topical applications of the Faradic current from a Kidder's battery.

Dr. F. H. Davis reported a case of relapsing fever. The patient, with the exception of some gastric disturbance, seemed to have fairly entered upon convalescence when a relapse occurred. Quinia had been freely administered. The speaker inquired whether other cases had occurred in the practice of those present, and also whether there were cases of the relapsing fever known in Europe.

Dr. Bartlett reported a similar case in which the patient relapsed every Thursday for ten weeks, in spite of large doses of quinia. When blue mass was combined with the latter, some improvement occurred, but large doses were necessary. The patient was finally removed from his residence, when it was discovered that there was an overflow from the main sewer of the house. After the removal, recovery was complete and rapid. He had no doubt, that relapsing fever occurred in this country.

Dr. Davis explained that his patient lived in an upper story of the house, and that the wife of the latter was threatened with a similar disease.

Dr. Henrotin reported a case of emansio mensium from vaginal contraction, relieved by surgical interference. The amount of grumous blood discharged was very unusual.

Dr. A. R. Jackson reported several cases of subinvolation of the uterus, treated in the Woman's Hospital of Illinois, by the application of fuming nitric acid. He dwelt upon the normal and abnormal process, when sub-

involation existed. Comparing the relative dimensions of the organ in its contracted and enlarged conditions, he explained the method employed by him in making these applications, which were painless when no sound tissue was invaded. The effect produced, was the stimulation of the womb to a point where contraction was induced. Ergot had been coincidentally administered by the mouth. Prompt and permanent cures were effected.

The Secretary made some remarks upon cases of contagious impetigo recently treated by him. He alluded to the fact, that no parasites had been found to occasion the disease, either in New York or Vienna; and announced that Dr. Tilbury Fox had recently limited to this disease, the once generic term, "Impetigo." After a brief description of the disease as it occurred in adults and children, he compared the observations of Dr. R. W. Taylor, of New York, with those of other dermatologists.

Dr. Jackson reported a case of sigmoid-shaped enlargement of the sterno-cleido-mastoid in a child.

On motion of Dr. M. W. Wood, U. S. A., the following preamble and resolutions were adopted:

"WHEREAS, Dr. Jno. Bartlett did, on the 10th of November, 1873, read to this society, a paper giving a 'description of a marsh plant from the Mississippi River ague bottoms, with a consideration of its genetic relations to malarial diseases;' and

"*Whereas*, This paper has since been published as one of the productions of this society; and

"*Whereas*, The theories advanced in this paper, have not since received, so far as known to us, either confirmation or refutation; and

"*Whereas*, It is desirable in the interests of medical science, that a matter of such importance be given a careful investigation; therefore, be it

"*Resolved*, That a committee of at least five members of this society be chosen—of whom two, at least, shall be microscopists—with instructions to wait upon Dr. Bartlett, and carefully investigate such evidence as he may have to offer, bearing upon the theories advanced by him; and to report in writing, at their earliest convenience, the result of this investigation."

The following committee was then chosen to act in accordance with the terms of the resolution:

Drs. H. A. Johnson, J. W. Freer, Walter Hay, Lester Curtis, and J. H. Etheridge.

The society then adjourned.

THE NEW YORK MEDICAL RECORD. — After January 1st, *The Medical* (*N. Y.*) *Record* will consist of sixteen pages, weekly, of text, and will form an annual volume of 832 royal octavo pages; being nearly one-third larger than before. The subscription price will be raised to $5 a year, and the publishers will prepay the postage to all subscribers. — *American Medical Weekly.*

MERCURIAL OINTMENT IN BOILS AND CARBUNCLES.—Dr. T. Roth lauds, in the *Deutsche Klinik*, the local application of gray ointment in boils and carbuncles, especially the early stages. He anoints the affected part with the ointment four times daily, and thereby reduces the inflammation and "backens" the boil most satisfactorily.—*Phil. Med. and Surg. Rep.*

Gleanings from Our Exchanges.

REPORT ON OTOLOGY.

BY SAMUEL J. JONES, M.D., PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE CHICAGO MEDICAL COLLEGE.

From Transactions of Illinois State Medical Society.

IN presenting to the Society a Report for another year, on Otology, it has seemed desirable to devote a portion of it to the ear, in health, before proceeding to consider its diseases. The physician is often asked, by the laity, what care is necessary for the ear in health. In general terms, the proper answer is, none. The ear, like the other organs of the body, is so organized that, in health, it will take care of itself. When any one of its functions are so performed as to attract special attention, it is fair to assume that some abnormal condition exists, which renders it advisable that careful examination of the organ be made. The detection of the presence of an accumulation of cerumen in the external meatus, is a frequent source of chagrin to patients, who conclude at once that its existence argues a want of proper personal cleanliness. Such is not, however, necessarily the case. When the ear-wax is secreted in its normal condition, the ordinary movements of the jaws work it to the outer portion of the meatus, when the use of the towel in the bath will remove it. When its removal in this way fails to occur, examination will frequently reveal an unusually dry condition of the skin within the meatus. This dryness, in a large proportion of the cases, seems to be attributable to chronic non-suppurative inflammation of the ear. The wax secreted under these circumstances seems to be deficient in moisture, and, when it accumulates there will be found mixed with it, desquamated skin from the meatus—sometimes in quite large flakes; at other times, numerous small particles, and hairs that have been cast off with the epidermis. Having once begun thus to gather, the accumulation continues to increase; an additional portion of the watery part of the wax evaporates, leaving the mass harder. Gradually the meatus almost fills, and when illuminated there is a shining surface reflected, that has been mistaken, by those inexperienced in examining the ear, for the shining surface of the membrane of the drum of the ear. From this it may, however, readily be distinguished, by the fact that in the healthy membrane of the drum the reflected light shows itself in the form of a "triangular light spot," (which is absent when the membrane is opaque,) whereas the reflection from a mass of cerumen is an evenly-shining surface. To the experienced eye inspection will readily detect its existence, and various symptoms — usual consequences—of its presence, would suggest examination, such as impaired hearing—imaginary noises in the ear —sometimes dizziness, and unsteadiness of gait in walking, etc. When its existence has been discovered its removal may be most readily effected by syringing the meatus with some alkaline solution—alkalies being the most effectual solvent of the wax. Whatever fluids are injected into the meatus, their temperature should be very nearly that of the blood, to prevent either dizziness or inflammation resulting. Often this mass of wax is firmly adherent to the small hairs in

the meatus which have not been cast off, and should an attempt be made to remove the mass by force, such violence may cause diffuse or circumscribed inflammation of the meatus. When this removal shall have been effected, inspection shows the unhealthy condition of the meatus. If the condition be one of dryness simply—such as occurs very frequently as an accompaniment of chronic catarrhal inflammation of the middle ear—lubricating the meatus with a solution of bi-borate of soda, with a small amount of glycerine and some carbolic acid added, is generally sufficient to save the patient much annoyance, and prevent a recurrence of the trouble until the removal of the primary cause affords entire relief.

The removal of foreign bodies from the meatus is often best effected by syringing—having first ascertained by inspection that such foreign body is present. If the foreign substance be an insect it can often be dislodged simply by filling the meatus with water, and thus cutting off its respiration; and in this way violence to the ear may be avoided. A word of caution regarding the use of an instrument designated an "aurilave," which is now being extensively vended, may not be amiss. Its construction is such that the piece of sponge that is attached to the end of the stick, when introduced into the meatus, forces the contents of the meatus before it, causing an impaction of the wax, epidermis, and loose hairs, in the inferior portion of the meatus, and often against the membrane of the drum of the ear.

The injudicious use of the nasal douche, is also an occasional source of injury to the healthy ear, producing acute inflammation of the middle ear, and perforation of the drum membrane. When being used the top of the column of fluid in the reservoir should be but a few inches above the nose.

Further observation seems to indicate very conclusively, that the ear, in health, possesses considerable power of accommodation, which fact may be taken advantage of to develop the power of hearing by systematic exercise, where any impairment exists.

Often the first departure from the condition of health, in the ears, which persons detect, is impairment of hearing, and of this they are accustomed to speak as a disease, instead of a consequence of disease. They often ask if their "deafness" is not hereditary, and state that certain other members of their family were sufferers from impaired hearing. Hereditary deafness, if possible, is certainly not of frequent occurrence. which fact, if more generally understood, would save much needless apprehension.

It is important that the distinction should be made between cases of impairment of hearing resulting from some defect in the conducting apparatus of the ear, and those in which the perceptive apparatus is at fault. Prognosis and treatment will both be materially influenced thereby.

In previous reports to the Society, allusion has been made to the gratifying diminution in the number of cases classed as nervous deafness. Recently attention has been more drawn to cases of total, or almost total deafness, following cerebro-spinal meningitis, and another form of affection of the labyrinth called Maniere's disease.

Professor Voltolini, of Breslau, has described what he calls "otitis labyrinthica," which occurs chiefly in children, and resembles in many respects the consequences which we have been accustomed to consider as cerebro-spinal meningitis.

It is a noticeable fact that the cases of deafness following cerebro-spinal meningitis seem to occur chiefly, if not exclusively, among quite young persons, and certain characteristics which he ascribes to otitis labyrinthica, should lead us to examine more closely our cases of supposed cerebro-spinal meningitis. In these cases the general practitioner has opened to him a large field of usefulness. The aural surgeon usually sees these cases only after all change has occurred, and loss of hearing has resulted, and an effort is being made for its resto-

ration. More careful observation is needed in the beginning, and during the progress of the disease, and further, *post-mortem* examination of the labyrinth in fatal ones, to understand these mysterious cases. One of the embarrassing consequences of these diseases of the labyrinth, is the persistent tinnitus aurium. This ringing occurs under various circumstances and from various causes, so that treatment must, in each case, depend upon the cause which produces it. In some cases, where it was supposed to depend upon abnormal tension of the tensor tympani muscle, division of that muscle through the membrana tympani is said to have given relief.

The marked depression of spirits which occurs in persons who suffer from affections of the ear is a noticeable feature of these affections. It is most strikingly shown in those cases of persistent tinnitus, and in several recorded cases this is shown to have been the cause of suicide.

Your Committee would invite especial attention to acute inflammation of the mastoid cells, which is occasionally mistaken for erysipelas. The peculiar redness of the skin over the mastoid process, in these cases, is not unlike the appearance of erysipelas in its early stage. It is an error which occurs like that in acute inflammation of the lachrymal sac, and sometimes leads to disastrous consequences. It is sometimes mistaken for circumscribed, or even diffused, inflammation of the external meatus, which should not occur if the parts be at all carefully inspected. If the disease be recognized in its early stage the application of a few leeches over the mastoid process will generally prove sufficient to check its progress. If, however, the case be only seen at a later stage, when pus has formed, the sooner puncture is made and the pus evacuated the greater will be the safety to the patient. An anxious expression of countenance, in addition to the excessive pain accompanying this, characterizes it. Where discharge exists as a consequence of this inflammation, and escapes, either through a spontaneous or artificial opening, its removal should be hastened by thorough syringing with some astringent solution, as in the treatment of a discharge from the meatus. Regarding such discharge from the external meatus—so-called otorrhœa—there is a popular error that it is dangerous to check it lest metastasis to the brain occur. For fear that some such result might follow the checking of the discharge, it is allowed to continue for years, at the imminent risk to the life of the patient. That discharge is but a consequence of some pathological condition—usually the result of some acute or chronic inflammation—which should be discovered and removed, when the consequence will disappear with the removal of its cause. In every instance, without exception, where such discharge from the ear exists, an effort should at once be made to remove its cause. If there be perforation of the membrane of the drum of the ear accompanying it, on the disappearance of the discharge a decided tendency to closure of the opening in the membrane of the drum will manifest itself—contrary to the generally received opinion on that point. Where the edges of the opening are in apposition, or approximate it, the opening heals readily; if the opening be circular, or the edges wide apart, it may become necessary to cauterize them and start a granulating surface to fill the opening; but the tendency to repair is much greater than is generally supposed.

In diagnosis the contributions for the last year have probably been less than in some other departments of otology. A fact worthy of note is that, when the Eustachian tubes are inflated, either by the Valsalvian or Politzer's methods, or by the Eustachian catheter, and there is an improvement immediately in the patient's hearing, the difficulty lies, at least in part, in the Eustachian tubes. Where, however, the tubes are opened, the membrane of the drum is nearly normally clear, and no improvement in the hearing occurs on such inflation;

the obstruction usually lies in some other portion of the conducting apparatus, or possibly in the perceptive apparatus, and the prognosis is more grave. For the purpose either of inflating the Eustachian tubes or of applying any medicament to the Eustachian tubes or middle ear, the pure silver catheter will be found the one most generally useful, as it can readily be bent at once to suit the variations of the nostrils of different patients, or of the two nostrils of the same patient. If properly adjusted it can be introduced without pain or danger to the patient, and it may safely be said that there is no substitute for it in the treatment of diseases of the ear.

Since the report of last year there has appeared a "Treatise on Diseases of the Ear," by Professor Roosa, of New York, which has no equal in the English language. It is a work useful alike to the aural surgeon and the general practitioner. A more limited work, entitled "Lectures on Diseases and Injuries of the Ear," by Mr. W. B. Dalby, of London, is also a valuable contribution, and embraces many of the more recently accepted ideas in aural surgery.

Numerous monographs on the various departments of otology have been written, which are valuable contributions to the literature of otology, and show the increasing interest now felt in this field, so much neglected in former years.

NITRITE OF AMYL AND BELLADONNA IN DYSMENORRHŒA.

NEW YORK MEDICAL JOURNAL AND LIBRARY ASSOCIATION,
STATED MEETING, NOV. 27, 1874.

THE paper for the evening was read by Dr. Mary Putnam Jacobi, upon "Nitrite of Amyl and Belladonna in Dysmenorrhœa."

The clinical history of three cases was given to illustrate the method of operation of the above remedies. All three were cases of severe spasmodic dysmenorrhœa. They were treated by administering belladonna for several days previous to the recurrence of menstruation, and nitrite of amyl by inhalation during the paroxysm. This treatment, it was believed, had a rational basis.

The argument in its support was founded upon the data furnished in the second case, in which were manifest three sets of phenomena:

(1.) Vomiting, pallor of skin, cold hands and feet.

(2.) Extraordinary peristaltic action of the intestines.

(3.) Spasmodic pain in the uterus.

All these point toward one element —namely, that of spasmodic contraction of blood-vessels.

First, the so-called sympathy between the uterus and the stomach, and between the stomach and brain, were fully considered in their dependence and interdependence with reference to the symptom, *vomiting*.

It was believed, reasoning from the experiments of Schiff and others, that the vomiting of pregnancy, vomiting of sea-sickness, and many cases analogous in character, was due to the same cause, namely, anæmia of the brain, producing spasmodic contraction of blood-vessels at its base.

It was farther argued that anæmia of the intestines produces contractions or increased peristalsis, due to spasmodic contraction of blood-vessels.

There are three conditions in which a hollow muscular organ can contract in the state of vacuity:

(1.) After direct irritation of its nerves.

(2.) After direct irritation of its muscular fibre.

(3.) After changes in its circulation.

A detailed account of six experiments was given. The experiments had been performed upon rabbits. The abdominal cavity was opened, the intestines drawn out and carefully protected in a bag of oil-silk, which was kept immersed in a vessel of warm water; the uterus exposed, and the abdominal aorta exposed. The aorta was then compressed with a ligature, and the result carefully noted.

Several waves of peristalsis ran *down* the rectum, but never in a contrary direction. Contraction of the uterus occurred, and was distinctly visible at the middle third of the organ. Upon removal of the ligature the contractions ceased. The time at which contractions appeared after compression of the aorta was made, also the duration of the contraction after compression had been removed, were carefully noted. The conclusion made from the experiments was, that tonic contractions of the uterus may be excited by occlusion of the aorta, and that such contractions continue from one to four minutes after compression has been removed. Clonic contractions also occurred, after the type of contractions of masses of smooth muscular fibre.

What bearing do the results of these experiments have upon the treatment of spasmodic dysmenorrhœa?

The pain in these cases is dependent upon tonic and clonic contraction of the uterus.

These, in turn, are dependent upon some cause. Of the conditions in which a hollow muscular organ can contract in a state of vacuity, direct irritation of muscular fibre and direct irritation of nerves were excluded. Consequently we are obliged to fall back upon changes in the circulation of the uterine walls. If the change of the blood-vessels passes to an irritation, spasmodic contraction must take place, and uterine contractions will be determined by local anæmia.

Spasmodic contraction of blood-vessels resulting from irritation of vaso-motor nerves, is the cause of the pain of spasmodic dysmenorrhœa. It is upon these considerations that the remedies suggested are used. The *secondary* effect of belladonna is dilatation of the blood-vessels.

Belladonna is to be administered, therefore, previous to the occurrence of menstruation, for the reason that it is desirable to obtain the *secondary* effects of the remedy,

Nitrite of amyl is used for the purpose of relaxing blood-vessels. This is in accordance with the admitted physiological action of the remedy.

This method of treatment, of course, is more especially adapted to cases of spasmodic dysmenorrhœa; but it has been found, both in the experience of the author of the paper, and in that of others, that great relief may be afforded even in those cases in which the dysmenorrhœa depended upon displacements, constriction of the cervix, etc.

The method is, to administer belladonna in ordinary doses for several days previous to the occurrence of the menstrual flow, and when pain comes, to administer by inhalation from two to six drops of the nitrite of amyl, p. r. n. In one case a single drop of amyl was all that was required.

Dr. Sell remarked that he had been in the habit of administering nitrite of amyl by the mouth, and had obtained just as good results as he had obtained when the remedy had been inhaled. He prescribed it in one-drop doses, combined with drachm doses of peppermint water, and repeated every half hour. In one case of dysmenorrhœa, and one only, he had used the nitrite of amyl, and in that case the patient was completely relieved of pain.

Drs. Pallen and Peaslee did not feel prepared to discuss the paper.—*N. Y. Medical Record.*

"UPON THE RESEARCHES OF CURRY, AND THE RECENT VIEWS WITH REGARD TO THE REMEDIAL USE OF WATER."—The researches of Curry were made at the close of the last and the beginning of the present century.

It appeared from the reading of the paper, that Curry resorted to the use of water extensively in the treatment of a great variety of diseases. Not only were his observations made with regard to the effect of cold, but also of warm water. The results of his experience were extensively quoted, and the conclusion was easily drawn, that the water treatment of to-day is essentially a revival of a practice adopted three-fourths of a century ago. It was an interesting fact, also, that Curry appreciated and clearly set forth the importance of the thermometer, and indeed the present axillary and self-registering thermometer were anticipated by him. The quotations from Curry, although so old, sounded like the fresh observations of a master-mind upon this subject—so fully were they in keeping with the most recent views concerning the value of this remedial agent.

Prof. Flint's method of using the Cold Pack is as follows:

Wrap the body in a sheet wet in cold water, and, then sprinkle with a watering-pot, and continue the pack from ten minutes to half an hour, according to the temperature and condition of the pulse. Used in this manner, he is of the opinion that we obtain all the benefits of the *bath*.

Special reference was made to the internal use of water in the treatment of disease. The quantity to be taken in the treatment of fever should be regulated by the feelings of the patient. Air, food, and drink: these form the tripod whence emanate the laws which should govern the hygienic management of our cases of fever. The internal use of water was suggested in the treatment of renal affections. A case was related in which the urine was scanty, albuminous, and of very low specific gravity, accompanied by other symptoms of grave character, but was brought to a successful termination by water treatment, originated and executed by Dr. Perry, formerly house physician at Bellevue Hospital. The chief feature of the treatment was the administration of four ounces of water, or milk and water every half hour, regularly and steadily persisted in.—Dr. Austin Flint, in paper read before N. Y. Academy of Medicine.—*N. Y. Med. Record.*

ERGOTIN IN CROUPOUS PNEUMONIA.—Dr. Wycisk, acting on the principle that this drug contracts the vessels, and so prevents exudation from them, has treated six cases of croupous pneumonia in this way, and gives the following report: In one such case, marked by an excessive highly albuminous expectoration, it ceased entirely two hours after the administration of the drug in powders of nine grains each every quarter of an hour. The abundant rales in both lungs soon diminished, so that there was only a slight crepitation at the original focus of the disease. These good effects lasted for two days. Two relapses occurred, however, but the same good effect was again obtained by the administration of the ergot. After the second relapse, ten drop doses of the tincture of ergot were given four times daily, until convalescence was fully established. In the five other cases the ergot was used early, and none ended fatally; none became chronic; and none left appreciable deposits behind them; in all of them the exudation was decidedly checked by the ergot. It is, however, held to be a dangerous remedy when the lungs are considerably infiltrated, where there is emphysema, where the cerebral arteries are weak, and where the patients are feeble or decrepid.—*Allg. Med. Central Ztg.*, 88, 1874.—*N. Y. Med. Record.*

DR. E. WARREN SAWYER, a graduate of the Harvard Medical School, has obtained the position of Lecturer on Obstetrics at the Rush Medical College, after a competitive examination with thirteen others.—*N. Y. Med. Record.*

MEDICAL GRADUATES.—The Medical Colleges of the United States graduated in the year 1874, three thousand students.—*N. Y. Medical Record.*

PUERPERAL FEVER IN THE NEW MATERNITY AT BONN.—In a letter to *The Lancet* Nov. 28, 1874, a correspondent writes, concerning the new Gynæcological Institute at Bonn:

"It is a singular fact that puerperal fever broke out immediately after the opening of the hospital, and six patients died from it, while since that time there has not been a single case of the disease."—*N. Y. Med. Record.*

A CANINE SURGEON.—An interesting instance of sagacity has been recorded by a correspondent of the *Philadelphia Medical Times.* A large dog of the St. Bernard and Newfoundland breed, called "Carlo," had been brought up with a cat, and the two became great friends. The cat had the misfortune to swallow a needle and thread which had got mixed up with some minced-meat prepared for its food. The cat suffered intensely. The dog, after some apparent deliberation, fixed upon a spot in the cat's neck, and commenced to lick it, which operation it continued to perform very assiduously for the better part of two days, his feline friend aiding him by keeping its head on one side. All at once the dog got much excited, and was seen to be anxiously striving to catch something between its teeth. The animal succeeded at last, by a sudden jerk, in seizing the point of the needle, and drawing it through the skin and fur; but it still hung by the thread, which was divided by the daughter of the dog's master. The dog subsequently, after greeting the return of its master's son, immediately went to the place where the needle and thread had been thrown. Dr. Benjamin Lee, who relates the circumstance, says that he has been at the pains to verify the facts, and to do himself the pleasure of shaking "Carlo's" paw, and giving him the salutation of a *confrere.*—*London Lancet.*

THE BRITISH MEDICAL ASSSOCIATION will meet in Edinburgh next year. Preparations have been begun, and "lively and pleasant expectations" of the visit are already indulged in.

A CURE FOR BRIGHT'S DISEASE.—Dr. Hegswald says, a half pint thrice daily, of a fresh infusion of the leaves of *Asplenium Scolopendrium*, L., is a most successful treatment in Bright's disease. This is the harts-tongue or spleenwort, and is said to be popular in Devonshire and elsewhere, for its medicinal virtues.—*Phil. Med. and Surg. Rep.*

DANGER FROM EXCAVATIONS.—It is well known that the exposure of large quantities of fresh earth, as attends railroad and canal construction, develops intermittent and typho-malarial fevers. To lessen this, Dr. Stephen Smith, of New York City, offers the wise recommendation that sewers be laid only after November 15th, and before June 1st; and last Tuesday week the Board of Health, accordingly, resolved that the Commissioner of Public Works be requested to omit all excavations between June 15th, and October 1st, and that no subsoil be exposed during that time.—*Phil. Med. and Surg. Rep.*

TUBERCULOSIS NOT INOCULABLE.—In a late communication to the Academy of Sciences of Paris, M. Metzquer tried to upset Villemin's doctrine. For the last five years the author has made experiments (from seventy to eighty) under the direction of Prof. Feltz, of the Faculty of Nancy. He never succeeded in inducing pulmonary consumption in the inoculated animals. The results were capillary embolism, infarctus, vesicular pneumonia, &c., all of which lesions have (the author maintains) been confounded with tubercle. Tuberculosis may, however, be generated in animals (says M. Metzquer), without inoculation of tubercular matter, by rough treatment, bad food, and, strange to say, by inflicting a wound upon them.—*London Lancet.*

SUPPRESSION OF URINE FOR TWENTY-FIVE DAYS.— Dr. A. W. Fontaine (*Virginia Medical Monthly*) reports a case in which the above phenomenon took place. Patient was a lady, aged twenty-one, nervo-sanguine temperament. The urinary suppression took place during an attack of intermittment fever. Diuretics one and all failed utterly to restore the action of the kidneys. Cupping, blisters and galvanism were alike futile. On the twenty-fourth day an injection into the bladder was made with twenty drops tinct. cantharides in a half pint of warm water. The next day a little urine was seen, which, under the same treatment, gradually increased to normal amount. Other cases carefully observed, are noted, in which suppression of urine continued respectively eleven days, sixteen weeks, twenty-two weeks, fifteen months, and lastly, a youth, seventeen years old, who never made water in his life, and was perfectly vigorous and active.— *Detroit Medical Journal.*

LETZERICH ON LOCAL AND GENERAL DIPHTHERIA.—Letzerich has recently published his views on this subject, which have special interest, as he is one of the boldest defenders of the parasitic theory of diphtheria, and has contributed some very important data for the support of his views. He states his belief as follows: Local diphtheria is a contagious disease of the mucous membrane. The *contagium* consists of a fungous vegetation which goes through its development and growth in the diphtheritic exudation, and in the tissue of the mucous membrane if there is no exudation. Should these low organisms force their way into the circulation, they spread and increase in the body, and work a general infection; *i. e.*, general diphtheria.

These low organisms which he classes as bacteria, plasma spheres and micrococci, etc., induce various changes both primarily in the local foci of the disease; and secondarily, in such organs as the kidneys, spleen, liver and heart. First come disturbances in the nutrition of the tissues themselves, from the occurrence of fungous emboli; these interfere with the circulation, and then an astonishing increase in the fungi takes place. With the increase of the micrococci is *pari passu*, a destruction of the cellular elements, so that the cells of the kidneys, liver, and spleen, may disappear, as well as the contractile substance of the cardiac muscle.—*Virchow's Archiv.*, 4, 1874.—*N. Y. Med. Record.*

MR. ERICHSEN ON AMERICAN SURGERY.—On November 9th, Mr. Erichsen delivered an address in London, on his impressions of American surgery during his late tour in this country. It is in general favorable, as may be judged from the following extract:—

Surgery in the United States certainly stands at a very high level of excellence. The hospital surgeons throughout the country have struck me as being alike practical, progressive, and learned in a very high degree. In practical skill, and aptitude for mechanical appliances of all kinds, they are certainly excelled by no class of practitioners in any country. They are thoroughly up to modern surgery in its most progressive forms, and I have never met with any class of men who are so well read and so perfectly acquainted with all that is done in their profession outside their own country. It would be a great injustice to American surgeons for it to be supposed that surgical skill is confined to the large cities, or to the few. On the contrary, I know no country in which, so far as it is possible to judge from the contemporary medical literature, there is so widely diffused a high standard of operative skill, as in the country districts and more remote provinces of the United States. The bent of the mind of the American surgeon is, like ours, practical rather then scientific; in fact, there are the same mental characteristics displayed in him that we find here; the same self-reliance,

the same practical aptitude, the same *curative* instinct, which leads him to consider his patient rather as a human being to be rescued from the effects of disease or injury, than as a scientific object to be studied for th advance of professional knowledge How, indeed, can it be otherwise tha that there should be such a resem blance?—*Phil. Med and Surg. Rep.*

Book Reviews.

CONTRIBUTIONS TO THE ANNALS OF MEDICAL PROGRESS, AND MEDICAL EDUCATION, IN THE UNITED STATES, BEFORE AND DURING THE WAR OF INDEPENDENCE. By Joseph M. Toner, M. D., Washington. Government Printing Office, 1874.

This is a volume of 118 pages, published by the Commissioner of Education, under the sanction of the Secretary of the Interior.

Although made up largely of short biographical sketches of the members of the medical profession, who practiced in the American colonies, prior to and during the War of Independence, yet it contains in addition a very valuable amount of information concerning the colonial legislation on medical subjects, and the state of medical education during that part of our history.

Indeed, it is a very valuable contribution to the history of the medical profession in America, and affords another illustration of the persevering industry and literary research of its distinguished author.

ON PRISON DISCIPLINE AND PENAL LEGISLATION, WITH SPECIAL REFERENCE TO THE STATE OF TENNESSEE. By J. Berrien Lindsly, M. D., D. D.

This is a pamphlet of 64 pages, printed in Nashville, and from the pen of one of the most gifted writers in our country. Although written with special reference to the treatmen of criminals and the course of Pena Legislation in Tennessee, yet it contains an array of historical facts, both in regard to the general progress o penal legislation throughout the civilized world, and the local progress in this country, which renders it of much value to all who feel an interest in the progress of humanity.

ON ANCHYLOSIS. By Lewis A. Sayre, M. D. Prof. of Orthopœdic and Clinical Surgery in Bellevue Hospital Medical College, New York. New York: D. Appleton & Co. 551 Broadway, 1874.

This is a neatly printed pamphlet of 20 pages, containing a paper on the general subject of Anchylosis, read to the New York Academy of Medicine, by Dr. Sayre, and originally published in the Transactions of the Academy, for October, 1874.

It may be read by all with interest and profit.

THE RELATIONS OF MEDICAL SOCIETIES TO PROGRESS IN SCIENCE. Inaugural Address of the President of the Medical Society of the County of Kings, New York, by Alex .J C. Skene, M. D., June 16, 1874 Brooklyn.

This is a pamphlet of 27 pages, devoted to a discussion of the three following propositions: "There are three avenues through which progress must come:

"1. Through the Medical Schools.

"2. Through Legislation by the People.

"3. Through the Profession, as Individuals and in Societies." While we could not agree with all the sentiments expressed by the author, we think his address may be read with interest.

TRANSACTIONS OF THE TWENTY-FOURTH ANNIVERSARY MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, held in the City of Chicago, May 19, 20 and 21, 1874. Chicago: Fergus Printing Company, 244–248 Illinois Street. 1874.

This is a volume of 248 pages, printed in good style. It contains a full record of the proceedings of the last annual meeting of the Illinois State Medical Society, including the papers read and the discussions relating to the same, together with the list of officers and members. As a whole, the volume is highly creditable to the Society, and to the officers under whose direction it was issued; and yet it is marred by certain important defects, that certainly should be guarded against in the future.

It is the second year of the experiment of employing a professional reporter, to furnish full reports of all verbal or extempore remarks by officers and members during the annual meetings. While the result has shown that such reports, if properly revised while passing through the press, add very much to the interest and value of the transactions, it has equally shown, that without such revision, every member who speaks is liable to have, either his thoughts so jumbled by the reporter that he can hardly recognize them as his own, or his words spelled wrong, or both. When matter is hurried through the press for a daily newspaper, there may be excuse for neglecting revision, and careful proof reading; but when four or five months are occupied in putting a work of 200 or 300 pages through the press, there can be no reasonable excuse for making *mite* read "might;" expectant, "expectorant;" simple continued fever, "self-continued;" alimentary canal, "abdominal canal," etc.; or to send out to the world such unmitigated nonsense as the following:

"We should aim to adapt the *nutritive* capacity of the patient to it, (the food) in such shape as to require the least change, particularly if the tongue and alimentary canal are coated. Why? Because something foreign has got there that must be got out. It is because there is a derangement of the *efficiency* of the secreting cells of the mucous membrane, so that they fail to secrete the normal amount of *lubricating material*."

The time was amply sufficient to have given every member whose remarks were reported, an opportunity to have revised, or at least read the proof sheets, of the matter attributed to him; and in future, the Society must require this to be done, or else follow the example of the American Medical Association, and employ no one as reporter, who is not also an educated physician: for abundant experience has shown, that no stenographer, however skillful, can report medical lectures or discussions correctly, unless he has also a good knowledge of medical science. We make these remarks, not from any disposition to find fault with the committee of publication, but from a sense of duty, and with the hope of securing better results in the future. N. S. D.

AT a meeting of the students of the Chicago Medical College, January 7th, the following resolutions were unanimously passed:

WHEREAS, Recent severe sickness has rendered it necessary for our highly esteemed Professor of Organic Chemistry and Toxicology, WALTER S. HAINES, to seek temporarily, a milder climate; therefore

Resolved, That we, the students of the Chicago Medical College, deeply regret even the temporary loss of instruction from so skillful a teacher, and so kind a friend;

Resolved, That we hereby tender to him our sincere thanks for his recent masterly instruction, and zealous attention to our interests; and offer him our heartfelt sympathy and cordial hope for his speedy recovery and return to his post of honor and usefulness;

Resolved, That a copy of these resolutions be presented to the Professor, and also a copy to the CHICAGO MEDICAL EXAMINER, for publication.

(Signed) M. WARE, F. R. WEBB, J. R. KEWLEY, } Com.

THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY.—This institution now occupies its new building, corner of Adams and Peoria streets. The accommodations for the comfort and treatment of patients, it is believed, are not surpassed by those of any similar institution in the country. The upper stories are sub-divided into a large number of single sleeping rooms, instead of extensive wards; while the lower stories are provided with ample sitting-rooms, dining-hall, dispensary and clinic rooms. The building is heated with steam and provided with excellent means of ventilation. The edifice, 105 ft. long, by 47 ft. wide, consisting of a basement and four stories, with mansard roof, is an ornament to the portion of the city in which it is situated.

From the seventeenth annual report, we learn that 1,012 patients were treated gratuitously during the past year, making an aggregate of 10,620 that have received the benefits of this charity since its foundation in 1858. Regular clinical lectures on the diagnosis and treatment of diseases of the eye and ear, are given at the Infirmary during the winter as also the spring terms of our medical colleges. These lectures are open to medical students and practitioners from any portion of the country.

Patients are admitted for treatment, who bring certificates (signed by some respectable physician or county supervisor) either that they are absolutely unable to pay for their board or treatment, or that they can pay for their board alone.

The dispensary is open from 2 to 3 o'clock p. m., for out patients.

The following are the officers of the Infirmary: Trustees—E. W. Blatchford, President; B. W. Raymond, V. President; D. Goodwin, Jr., Secretary; H. W. King, J. T. Ryerson. Treasurer—E. B. McCagg. Consulting Surgeons—Prof. J. W. Freer; Prof. H. A. Johnson; Prof. E. Powell. Attending Ophthalmic Surgeons—E. L. Holmes, M. D.; F. C. Hotz, M. D. Attending Aural Surgeon—S. J. Jones, M. D. Microscopist—I. N. Danforth, M. D. Superintendent—G. Davenport. Matron—Mrs. Davenport.

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Original Communications.

BALANITIS.

BY F. K. BAILEY, M. D., KNOXVILLE, TENN.

FREQUENTLY, upon a person calling for medical or surgical advice, we will at once diagnose the case from appearances which are obvious at the time.

What may be developed subsequently, it is often impossible to determine. The following case was diagnosed as balanitis, and at first it appeared susceptible of immediate cure.

April 8th, 1873—I. B. ——, aged thirty-five, of sanguine bilious temperament, well formed and muscular, occupation, stone-cutter, called upon me at the office. States that he has had sores upon the membrum virile for a week or more, and fears they may be chancrous. Found on inspection, that at the base of the glans, and bordering upon the preputial reflection, there was a row of small ulcerated spots associated with papules still unbroken, extending from frænum to frænum.

Considerable discharge of rather offensive character, and copious; cellular tissue slightly infiltrated in the prepuce; very sensitive and painful; no inguinal tenderness. States that he had chancres and bubo in one groin within a year, but had supposed himself cured.

Had connection about fifteen days previously with a woman who was not above suspicion, and hence his fears.

Besides the local troubles, I found his tongue coated, the skin and conjunctiva yellow; pulse about ninety; bowels confined; urine red and hot.

Pres. comp. cath. pills, and a weak solution of carbolic acid as a wash. I also touched the affected parts with carbolic acid and water equal parts.

12th.—Has called in two or three times, when I found the local lesion

unchanged, except increased œdema of the prepuce, and soreness unabated; still yellow, and tongue coated. Added acetate lead to the carbolic wash, and gave calomel and Dover's powder, grs. iij. of the former, and grs. v. of the latter, to be taken night and morning.

21st.—Visited him at his residence, and found the prepuce much swollen and painful. Glans not swollen, and liquids can be made to reach the affected parts. No active inflammation, but parts very sensitive to the touch; bowels open, but skin hot; pulse ninety or more; could not sleep for two nights. Left pulv. Doveri, to be taken every four hours, and continue wash.

24th.—Visited patient, and found that on yesterday, hæmorrhage had occurred, which soon stopped; also, that at 3 a. m. to-day, the bleeding returned, and continued for three hours; reports the loss of a large quantity of blood from the penis, and some from the nose. Saw him at 9.30 a. m., and found the pulse slow, (less than seventy,) soft and small; countenance clear; tongue cleaning; complains of soreness of the gums, which may be a result of mercurial action; had fever every day till to-day; I had sent him quinine on the 22d and 23d, which produced ringing in the ears, and last night he says he was considered delirious by the family. Find the swelling of prepuce much diminished, and on the right side of the glans anteriorly, a small abraded spot, from which the blood had flowed.

There is a pinched and rather bluish appearance to the glans, urine clear, and more abundant; bowels open from castor oil taken last night; free from pain, and has some appetite; left powder of gallic acid to be taken every three hours, alternated with small doses of quinine; also left Monsel's solution to apply, should bleeding return; diet to be simple, but nutritious.

25th.—Very much improved; can sit up, and the affected parts appear to be healing; no return of the hæmorrhage; to take one gr. quinine three times daily; directed him to touch the ulcerated surface with nit. silver stick once a day.

28th.—Patient called at my office, having walked one and one-half miles; found him much improved in general appearance; tongue cleaning; no fever, and free from pain; on examining the membrum virile, found deep ulcerations upon the glans, which appear to have extended the whole circumference; pus healthy, and the prepuce less swollen, and free from inflammation.

Dressed the parts by means of a small rope of cotton pushed under the prepuce to the ulcerated surface, and saturated with a solution of carbolic acid; gave six blue pills, to be taken night and morning till the bowels move freely. I should have observed that the glands in each groin were somewhat tender, and slightly enlarged. Also prescribed as follows:

R.—Iod. Potassii, ʒ ij.
Liquor Iod. Ferri, ʒ iij.
Syr. Zinzibius, Syr. Sarsæ Compos, a. a. ʒ j.

M.—Sig. Teaspoonful at each meal and at bed time.

30th.—Bowels open, but says the stools were very lumpy; ulcerations much as on the 28th. Pus healthy. Preputial œdema lessening; can expose the morbid surface much better than at any previous time. Touched

the ulcerated surface with nit. silver, and dressed with cotton wet with sol. carbolic acid. To take castor oil to-night.

May 2d.—Called; much the same; ulcerations not extending; a chancrous looking sore on the front of glans, and another on the frænum.

Applied nit. silver, and dressed as before; tongue cleaner; no appetite, and complains of debility; bowels open. Pres. as follows.

R.—Aromat. Sul. Acid,	ʒ ij.
Sulph. Cinchoniæ	gr.i
Tr. Cinch. Compos.	℥ iiss.

M. Sig. Teaspoonful before each meal.

3d.—Appetite improved; ulcerations not extending, but indisposed to heal. At the suggestion of a medical friend applied weak dilutions of nit. acid, and gave pills as follows:

℞ Sulph. Quinine,	grs. xvj.
Pulv. Opii.	" iv.
Calomel.	" viij.

M.—F. Pil. No. 8. Sig. One every four hours.

12th.—Attempted to work a few days, but found that muscular exertion caused some excitement in the parts. But little change in the ulcerated surfaces; applied stick nit. silver, and continued the carbolic dressings.

16th.—General appearance more favorable to healing, but there is still a tardiness not desirable; small ulcerative spots near the frænum, and upon the glans. The integumentary tissue of the prepuce less œdematous; some appetite, and bowels not constipated; but cannot sleep well; applied dry calomel, and gave ten grs. as a cathartic, followed with castor oil.

18th.—Much the same; insomnia, mostly from soreness of the parts; gave brom. potassi. in doses of 15 grs. at night.

22d.—Still indisposed to heal; has taken quinine for a few days past, with some improvement in appetite; has been at work since the 19th; applied iodoform to the ulcerations, and dress with sol. carbolic acid as before; cont. quinine and brom. potass.

23d.—Slight improvement in appearance of ulcers; cont. iodoform and quinine.

24th—Induration of the integuments increased, with soreness, and the ulcers still indolent; applied opium in powder, with sub. nit. bismuth.

26th.—Slept better for two nights past, there being but little pain; induration somewhat lessened; cont. opium dressing.

27th.—Induration extending upwards on the penis, upon the left dorsal aspect; ulcers about the same; applied calomel with opium.

29th.—Was sick yesterday from headache, chills, etc.

Called this a. m., when I found the ulcers unchanged, still painful at night. Prescribed black-wash, and as a temporary dressing used opium and salicin. Internally the following:

℞ Nitro-Muriatic Acid,	ʒ ij.
Sul. Quinine,	gr.i.
Tr. Cinch. Compos.,	℥ iiss.

M.—Sig. Teaspoonful morning and evening.

To apply to-night, also opium and salicin.

30th.—Much the same; the ulceration in the cellular tissue of the prepuce disposed to continue, appears to be working through to the surface from the original point of commencement. Applied sol. permanganate potash to the ulcers, all of which are indisposed to heal. To continue acid mixture.

31st.—Morbid surfaces cleaner and more natural in color, except the sinuous canal into the cellular tissue upon the left anterior of the penis. Appearances as if the integument which for some time has been indurated, may all slough off. Poured in solution permanganate potash, which caused more smarting than on yesterday. Patient having had chills for three nights past, followed with fever and sweating; p. m., quinine in four gr. doses till twelve grs. are taken, and to continue acid mixture. Reports that there are two discharges from the bowels every twenty-four hours, thin and bilious; appetite still indifferent.

June 2d.—Called at my office; had fever last night, and the pulse is one hundred; tongue still slightly coated; no change in ulcers; near the frænum on each side, the ulceration threatens to invade the urethral walls; bowels are loose, result of the acid mixture which he is to suspend, and take

℞	Sulph. Quinine,	grs. xxiv.
	Pulv. Opii,	" iv.
	Calomel,	" x.

M.—F. Pulv. No. 8.
Sig. One every four hours. Also

℞	Labarraques Sol.	℥ vj.
	Permanganate Potassæ,	ʒ iss.

M.

Use one part to three of water as injection, with directions to keep the whole ulcerated surface free from pus; to keep still and not attempt to come to the city.

11th.—Since the 2d inst., the patient has been visited at his residence by Dr. D. T. Boynton, and until today I had not seen him.

The ulceration has continued to spread, and the integument appears much infiltrated still. Sloughing of the prepuce has continued, and the parts present a rough appearance; has taken quinine in two gr. doses every four hours with opium; has slept more than at one time, and has some appetite. The chlorine solution has been continued, with permanganate of potash, introduced by means of a long speculum syringe.

17th.—Visited patient with Dr. Boynton; since the last report, much of the infiltrated integument has sloughed away, and the parts externally appear more regular in form.

There is still a sinus upon the dorsum, a little left of the mesian line, which threatens to invade the body of the organ.

Dr. B. made an incision in the direction of the sinus, laying the whole open, thereby relieving an apparent strangulation which lay across the dorsum, and near the corona glandis. On the whole there is evident improvement, and I may add that a few days ago hæmorrhage occurred, which was controlled by sol. persulphate of iron.

To continue tonics and opiates, with chlorinated soda.

July 1st.—Found general condition unchanged; free discharge from the openings, and the cellular tissue still infiltrated. Treatment to be continued.

13th.—Did not see the case till today. The body of the penis still much enlarged, and the cellular tissue involved to within an inch of the perineum. General health not improving. There is an ulcer upon the anterior right tibial region at about the lower third, which assumes an unhealthy appearance.

Indisposed to heal; has been taking tr. mur. ferri. with quinine, calo-

mel occasionally when the bowels are torpid, opium P. R. N.

The case being under the care of Dr. Boynton, I did not see the man until

August 9th.—Found the organ enlarged, and a deep sinus opening upon the surface on the right side. Pus appears to come from it more free than at any former period; has been injecting sol. carbolic acid in sweet oil, and taking tonics with brom. potassii. Ulcer upon the leg extending, and is quite deep. Despondent and impatient; to continue treatment, and to dress the leg with stimulating applications.

13th.—During the absence from town of Dr. Boynton, I have visited this case of late, and to-day called Dr. Boyd to accompany me. Decided to lay open the sinus, and therefore introduced a director as far as it would reach, passed a probe pointed bistoury in, and cut out about an inch in extent; there was some hæmorrhage, but it was soon stopped by pressure; dressed so as to keep up apposition of the sinus walls. To continue tonics.

17th.—The opening made by the bistoury is wide and gaping, but the general appearance not any more unfavorable. Simple dressings.

Oct. 1st.—Owing to illness, I had not been able to see this man, and he passed into other hands; I learn however that the penis is healed; no further discharge of pus since the operation; ulcer upon leg extending in size, and not improved in appearance.

Jan., 1874.—I have lately learned that this man went to the Hot Springs, Arkansas, during the autumn, and returned much improved; no return of the ulcerations upon the membrum virile, and the sore on the leg healed.

He was treated by means of large doses of iodide of potassium, which was the principal internal medication. I have not seen the man for four months, but understand his health is fast improving.

The above case is given somewhat in detail, as an instance of persistent ulceration and sloughing in a locality which for obvious reasons is slow to heal when diseased.

The man was broken down in health in consequence of his excesses, having been a subject of syphilis before the war. He was a soldier in the Federal army, and since his discharge therefrom, has been far from regular in his habits. On his first calling upon me, the morbid appearances described were such as we often find, and defined as balanitis.

The sequel proved that a deep-rooted affection had to be dealt with.

The terms balanitis and posthitis are alike applicable, for both the glans and prepuce were involved. An important feature in the case was the persistent obstinacy of the ulcerating tissue. It seemed at one time that the whole organ was bound to slough off; every local application appeared to have no effect, and only constitutional remedies were effective at last.

Ordinary gonorrhœal balanitis is quite common, and unless complicated with phymosis, easily cured. During the last spring, I met with three cases, and all negro boys not over fifteen years old, in which the prepuce was drawn over the glans, and could not be retracted when they called in. One of the number ceased his calls when told that an operation might be necessary. In the others I operated

by cutting the prepuce with a bistoury, to relieve pressure. One soon got well, but the other was protracted by an œdematous condition of the whole organ, and a gleety discharge which was very obstinate. There was also induration in the inguinal glands upon the right side, and I had reason to believe there had been chancrous sores previously to his coming under my care. I have met with many cases of excoriations upon the glans in negroes, whose habits are filthy, and that cohabit with a class of women who are never free from some disgusting condition of the genitals, such as herpetic eruptions, condylomata, and eczematous sores around the vulva, as well as vaginal leucorrhœa, and gonorrhœal discharges.

HERNIA OF THE WHOLE BOWEL.

BY H. H. BRIGGS, M.D., OF CHATTANOOGA, TENN.

L. A. R., aged 21 years; native of Tennessee. Farmer's daughter—always healthy and strong; physically, well developed; used to sturdy, out-of-door life and labor, was taken in travail, on January 11th in the evening. After an easy, though somewhat lingering labor, she was delivered, by a midwife, of a child, the unnatural appearance of which, caused the attendants to send for their physician, Dr. J. B. Norris. The child lived thirty hours.

On the morning of the 15th, at Dr. Norris' request, Dr. G. A. Baxter and I went down with him and made an autopsy.

Post-mortem, thirty hours after death. Cadaveric rigidity not marked. Body weighed three and one-half pounds, and was apparently that of a seven months' child. No marks or spots of any kind upon it. Dr. Norris assured us that it had not changed perceptibly in appearance since death.

Projecting from the abdomen, there was a tumor as large as two folded fists, bright red in color, and apparently made up of intestine. Tracing the tumor by its pedicle, we found that the latter entered the abdomen, at a quarter of an inch external to the umbilicus, and entirely separate from it.

Examining closely for evidences of a sac, we found none on the body of the tumor, but around its pedicle and extending for one-half inch from the abdominal walls, was attached a clear membrane, which we thought to be the parietal peritoneum, and dissection proved it to be such.

Opening the body, we found the lungs, heart, liver and spleen, natural in size, color and consistence. Following down the alimentary canal, we found the œsophagus and stomach natural, but the duodenum led directly from the pylorus to the opening in the walls of the belly.

Tracing the intestine down, fold by fold, the duodenum, the jejunum, the ileum, and the whole of the large intestine, except the rectum, were found to be extra-mural.

The extruded bowel was thickened, firm, and of a bright, red color. Its

serous coat was hardly to be seen or separated from the muscular. We noticed no adventitious membrane, nor any recent lymph.

The muscular coats of the bowel were markedly hypertrophied, showing the condition to have been of long standing. The mesentery was thickened and firm, as is indeed common in old umbilical herniæ. We found eight nodules scattered over it, solid to the touch, yellowish in color, and cheesy on section. The edges of the hernial ring were firm, clearly defined, whitish, and quite cartilaginous under the knife. We could see no granulations or evidences of recent inflammatory action. The seeming inflammatory adhesions between the mural peritoneum and the pedicle of the tumor, together with the glazed, contracted edges of the orifice in the walls of the belly, inclined us to the belief, that the hernia was due to a rupture of the parietes, rather than to a deficiency in them. It was produced at an early period in fœtal life. In none of the few books at our command, do we find mention of a ventral hernia of the whole bowel, occurring in early fœtal life: the child going to term and living for some hours after birth. With our present notions as to the suspension of the child in fluid during interuterine life, it is not easy to see how force could be brought to bear sufficient to produce a traumatic, ventral hernia; yet it seems probable that such was the case in the present instance. We know of no treatment applicable to the case.

The disparity between the development of the abdomen generally, and that of the extruded bowel, would have prevented its return.

It was impossible to close the exploratory incision with the tumor inside, so that enlarging the hernial ring would not have made reduction possible. Taxis would have availed nothing.

Clinical Reports.

PERICARDITIS WITH BRONCHO-PNEUMONIA.

A CLINICAL LECTURE IN THE MEDICAL WARDS OF THE MERCY HOSPITAL, BY N. S. DAVIS, A.M., M.D., PROF. CLIN. MED.

GENTLEMEN: The patient before you is a native of Ireland; aged about twenty-two years; a laborer; naturally strong and athletic. He was admitted to the hospital six days since, and was reported to have been sick nearly two weeks previously. He had been suffering from severe cough; pain in the chest, aggravated by motion; shortness of breath, and fever.

At the time of his admission, his face was deeply suffused with purplish redness; the cutaneous surface gen-

erally, and especially over the extremities, congested and cool; expression of countenance dejected and anxious; respiration short, hurried, and difficult; expectoration scanty, tenacious, and slightly bloody; cough frequent, and suffocative; pulse small, soft, and 120 per minute; tongue covered with a white coat; bowels inactive, and urine scanty. He complained of severe pain and soreness in both sides of his chest, but more severe in the cardiac region than elsewhere.

Percussion revealed entire dullness over the lower and posterior part of the right side of the chest, extending from the axilla to the diaphragm, and from the border of the pectoral muscle to the spine. The area of cardiac dullness was greater than natural, but over the rest of the left side of the chest, the resonance was nearly natural.

Auscultation, detected an unusually loud pericardial friction over the whole cardiac space, with increased impulse, but no unnatural valvular murmurs. A mixture of dry and coarse mucous rhonchi were heard over all the anterior part of the chest, except the cardiac space; but the lateral and posterior part of the right side gave only a sharp, sub-crepitant rale, with apparently very limited inflation. After the members of the class had individually noted the present physical signs, their attention was directed to a careful comparison of these with the general symptoms and history of the case, for the purpose of arriving at a full diagnosis.

The sharp pains, the frequent small pulse with loud pericardial friction, and full impulse, clearly indicated acute-pericarditis, with plastic exudation. The mixture of dry, wheezing, and coarse mucous sounds, with but little alteration of resonance over the anterior and left side of the chest, indicated general bronchitis, while the dullness on percussion, the limited expansion, and the fixed, subcrepitant rale, in the lateral and posterior part of the right side, indicate intense pneumonic engorgement or solidification of the corresponding part of that lung. The length of time the patient had been sick, compared with the present phenomena, rendered it certain that the inflammatory action in the pericardium, bronchia and right lung, was in the second stage of its progress.

The prognosis in this case is decidedly unfavorable. First, the pericardial inflammation may result in so much effusion, both plastic and serous, as to fatally embarrass the action of the heart. Second, the exudation into the right lung may be so copious in consequence of the excited condition of the heart, and the imperfect decarbonization of the blood, as to induce gangrene of some portion of lung tissue coupled with diffuse suppuration, and copious puruloid and fœtid expectoration. Third, the patient may escape both the foregoing perils, and yet become suffocated from œdematous infiltration into the portions of the lungs not involved in pneumonia. When the patient was first admitted to the hospital, the very strongly marked friction sound over the whole cardiac space, coupled with the extreme dyspnœa, caused us to cover his chest with emollient poultices, and give him a powder of calomel, two grains, and bicarbonate of soda and Dover's powder, each five grains, every four hours, and a teaspoonful of the following prescription, between:

℞.—Hydrochlorate of Ammon., ʒ iii.
Sulph. Morph., grs. iii.
Tart. Ant. et. Pot., grs. ii.
Tinct. Digitalis, ℥ i.
Syrup Liquorice, ℥ iii.
Mix.

Under this treatment, the pericardial friction has decidedly diminished, and both pulse and respiration have somewhat diminished in frequency. The danger from the pericardial inflammation is therefore lessening, and is not so much to be dreaded in the future as either of the other important pathological conditions named.

We will now place a blister over the right side of the chest, continue the prescription containing the hydrochlorate of ammonia, one teaspoonful every four hours, and alternate with it, sulphate of quinia, in doses of two or three grains, and feed him regularly with bland nourishment.

The quinia is given for the purpose of increasing the tone of the pulmonary capillaries, and thereby lessening the danger from pulmonary œdema, as well as to exert a general tonic influence. After one week had elapsed, the attention of the class was again called to the same patient.

He had continued the treatment just named during the first half of the week, when the expectoration becoming more copious, thin, purulent, and offensive, while the general bronchial rhonchi and pericardial friction had continued to decrease, two grains of pulv. g. camphor, and one-eighth of a grain of morphia was added to each dose of the quinia, and the hydrochlorate of ammonia mixture was exchanged for the following:

℞.—Liquor Ammon. Acetatis, ℥ ii.
Camph. Tinct. Opii, ℥ ii.
Carb. Ammon., ʒ iss.
Mix. Take one teaspoonful every four hours, in water.

This treatment, with as much nourishment as the patient could be induced to take, has been continued to the present time. The attention of the class was called to the fact, that the pericardial friction had now entirely disappeared, and the cardiac sounds were natural. The bronchial rhonchi had also disappeared from the left side of the chest, and the resonance was nearly natural; while over the whole lateral and posterior part of the right side, there remained entire dullness—no vesicular murmur, but anteriorly a coarse, movable, moist rhonchus. The patient is expectorating large quantities of a thin, muco-purulent matter, emitting a very offensive or putrid odor; his pulse is frequent and weak; his countenance pale and shrunken; and his expression anxious. From the symptoms now presented, it is evident that the bronchial and pericardial inflammations have nearly disappeared, while the pneumonia, involving the middle and lower part of the right lung, has resulted in gangrene of a portion of the inflamed structure, which is now undergoing disintegration, and giving rise to the copious and putrid expectoration. This was one of the dangers pointed out at the previous clinic, and it is now apparent that it will soon terminate the life of the patient. Gangrene of the lungs, as a result of pneumonic inflammation, is certainly of rare occurrence in this locality, this being the first well marked case that has come under our observation in several years.

It is probable, that in the early stage of the case, the exudation from the over-distended capillaries was so copious, as to completely obstruct the circulation through a circumscribed

portion of the inflamed tissue, in which case, death of the part must speedily ensue; or at a later period when the circulation was greatly embarrassed by the coincident pericarditis and bronchial obstruction, emboli may have formed in one or more of the arteries of the inflamed lung, plugging them so completely as to cut off the supply of blood to a limited portion of the tissue.

It will be remembered, that the patient had been sick at least one week before his admission to the hospital, and consequently, the first or congestive stage of the pneumonia had already passed, and exudation and hepatization had progressed so far, as to cause well marked dullness on percussion with suppression of the vesicular murmur; and from the extreme dyspnœa, with purple hue of the countenance, cool extremities, soft and quick pulse, it is probable, that if gangrene actually exists, it took place in the manner first mentioned; and it properly suggests the question, whether free bleeding from the arm during the first twenty-four or forty-eight hours after the commencement of the attack, might not have so far lessened the engorgement of the pulmonary vessels, and thereby limited the amount of exudation, as to have prevented the entire obstruction which has followed? From frequent opportunities to observe carefully the effects of prompt bleeding in the first stage of pneumonia, pleuro-pneumonia, and cardiac inflammations, we are as certain that such bleeding is capable of, at least, temporarily relieving or lessening the vascular fullness in such cases, as we are that quinia is capable of interrupting the paroxysms of an intermittent fever.

We cannot, therefore, sanction or justify that extreme professional opinion which would require you to exclude entirely the use of the lancet in medical practice. To be beneficial, however, the bleeding must be practiced in the first stage of the inflammation. After the tissue is already filled with exudative material, outside the capillary vessels, the abstraction of blood by venesection can do no good. At present, it is not likely that any treatment will do more than to palliate the cough, and temporarily sustain the strength of the patient. We will continue to encourage him to take nourishment, with moderate doses of opium and stimulants.

Note. — During the twenty-four hours succeeding the time of the last clinical examination, the patient became steadily more exhausted; the sputa more offensive, and of a dark brown color, as if mixed with disintegrating tissue; the mind became wandering; he refused all ingesta, and died on the evening of the third day. Although a *post-mortem* examination was much desired, yet it was refused by relatives, who immediately claimed the body for burial.

Translations.

PROGRESS OF MEDICAL SCIENCE IN GERMANY.

By Edmund J. Doering, M.D.

I. Snow as a Cleansing and Styptic Application for Surgical Wounds, by Dr. Hasse (*Centralblatt fur Chirurgie*, No. 38). II. Pleuritis; Empyema; Paracentesis Thoracis; Cure, by Dr. Blaschko (*Allg. Med. Central Zeitung*, No. 100). III. Medical Examinations in Germany.

I.

SINCE we are able to perform operations on the extremities without the loss of a drop of blood by Prof. Esmarch's method, we experience much more than formerly the great inconvenience of hæmorrhage whenever we have to operate on parts of the body where a compression of the blood-vessels is inadmissible; and still more so, if at the same time the capillaries and veins of the parts are overloaded and distended. Especially is this true of tracheotomy, for often it is essential here to hasten the various steps of the operation, rendered difficult by troublesome hæmorrhage.

Several times we had to perform this operation on winter days, when there had been a recent fall of snow. We gathered some of the latter, and used it instead of sponges, for the cleansing of the wound. When a handful of soft snow is pressed firmly for a few seconds on the wound, it will present a true cast thereof on being removed, leaving the cut surface free of blood, and benumbed for a while. The blood is absorbed much better by snow than by a sponge —and furthermore, the uniform compression, and the local influence of cold, causes the snow to act as an astringent on the cut capillaries and smaller vessels—and finally, through this latter property, also, as an anæsthetic on the nerves.

Thus, by repeated application of soft snow, we have a substitute for Prof. Esmarch's method, allowing a rapid and safe termination of the operation, and enabling the surgeon to operate with less chloroform than is usually required.

It is to be regretted that we cannot always have access to this excellent resource; for even at the proper season of the year, only quite soft snow is fit for our purpose. The snow must also be gathered very carefully, which is best done by lifting it up from the ground with a light shovel, and throwing it loosely on a flat dish.

II.

Since the introduction of improved instruments for the tapping of pleuritic effusions, the number of recoveries from pyothorax and hydrothorax have largely increased, especially of the latter disease, where in operating, it is of great consequence to prevent the entrance of air, which can be done

very effectually by means of the aspirator. Thoracentesis must, therefore, always be preferred to a tardy absorption or a spontaneous evacuation of the effusion.

To insure a recovery, many operators have been compelled not only to perform thoracentesis repeatedly on the same patient, but also to wash out the pleural cavity by means of injections. For this reason, the following case of empyema may be of interest, showing a complete recovery within a short time, after a single operation for the removal of the pus, with careful after-treatment.

Miss B., aged fifteen; has had fair health until her present illness, which commenced suddenly after exposure to cold, in June, 1874, with all the symptoms of an acute attack of pleurisy. The attending physician did not succeed in preventing an abundant effusion from taking place, or in promoting the absorption of the same during a period of two months. We were called to see the patient in the middle of August. We found her looking pale and greatly emaciated. Pulse quick; temperature increased; night-sweats, and an abundant catarrhal expectoration. The patient complained of tightness across the chest, sleeplessness, and a feeling of anxiety. Appetite lost; menstruation arrested. Physical examination showed the left side of the chest enlarged, bulging of the intercostal spaces, with complete dullness on percussion from the second rib downwards. Respiratory sounds absent: heart transposed to the right. On the left side of the chest, portions of the fourth and fifth rib projected irregularly, justifying apprehensions of caries and external discharge of the fluid contents of the thoracic cavity.

The fever and cough continuing, the emaciation progressing, the weakness increasing, with a copious discharge of sputa, and the inability to cause the absorption of the purulent fluid, either by external or internal remedies, thoracentesis had to be thought of, as offering the only chance of saving the patient's life. Prof. Waldenburg was called in consultation, and fully agreed with us in the advisability of the operation. We performed the operation without the administration of chloroform to the patient. The tap trocar was passed into the pleural cavity between the fifth and sixth rib, brought in connection with the aspirator, and about twenty-five ounces of a creamy pus drawn off. The wound was closed by a piece of sticking plaster. No injections of any fluids were made into the pleural cavity, and the opening was completely closed on the following day, no more pus having been discharged.

The patient felt immediately relieved after the operation; she coughed less, and rested well the following night. Quinine, iron, and beef-tea, were prescribed, and the patient sent to the country.

Prof. Waldenburg, finding on physical examination, still a portion of the purulent fluid within the pleural cavity, feared that the operation would have to be repeated. But this did not prove to be necessary, for within four weeks, no trace of any fluid could be detected, the patient having completely recovered. The rapidity of the cure was certainly greatly accelerated by the residence in the country, the salubrious country air,

leaving the patient mostly out doors, the internal use of cod-liver oil, and the external application of tincture of iodine.

At present, the young lady is in the enjoyment of perfect health, having a good appetite, getting stronger, and being free of cough. In this connection, we desire to call attention to the following points:

(1.) The differential diagnosis between pyo and hydrothorax, must be based more on the general symptoms, than on physical examination alone. If the fever does not subside after the use of quinine and digitalis, and emaciation progresses, night-sweats set in, then the presence of pus in the pleural cavity is established beyond a doubt.

(2.) Chloroform must not be administered, as the patient, by repeated coughing, can materially facilitate the discharge of the pus.

(3.) Injections of warm water, or of any other fluid, are not necessary.

(4.) A portion of the pus may remain in the pleural cavity, without necessarily retarding a complete recovery.

(5.) Thoracentesis is the best method of saving life in such desperate cases.

III.

The graduates in medicine of the nine Universities of Prussia, Germany, are compelled by law, to present themselves before a "State Board of Medical Examiners," for examination, before they can be licensed to practice medicine in that state. This same law also exists, and is rigidly enforced in the other states of the German Empire; likewise in Austria, France, England, and in nearly all of the other prominent countries of the world, with the exception of the United States of America.

The following table shows the result of the examinations in Prussia during the past year, and conveys also an idea, how rigid these examinations are, for about twenty-five per cent of the candidates were rejected; and we might further add, that no candidate is allowed to go up for examination, unless he can prove, by certificates, that he has attended at least eight courses of medical lectures — equivalent to four years study:

1873–74.

Universities.	No. of Candidates.	Passed.	Rejected.
Berlin,	124	89	35
Bonn,	39	33	6
Breslau,	37	32	5
Goettingen,	34	32	2
Greifswald,	81	61	20
Halle,	63	49	14
Kiel,	21	18	3
Koenigsburg,	45	25	20
Marburg,	33	30	3
Total,	477	369	108

The sum total of physicians licensed in the whole German Empire for the year 1874, is only 660.

During the same year, the innumerable medical colleges of the United States of America, graduated three thousand students.

In conclusion, we add for comparison, the following table:

1874.

Country.	No. of Inhabitants,	Practitioners Licensed in 1874.
Germany,	42,000,000	660
United States,	40,000,000	3,000

Further comment is unnecessary.

Editorial Department.

IDIOTIC AND FEEBLE-MINDED CHILDREN.

WE have received a copy of the Memorial prepared by a committee of the Illinois State Medical Society, asking the legislature of the state to make appropriations for erecting a suitable building for the reception, training, and care of the idiotic and feeble-minded children of the state. The number of such children in the state is estimated at not less than 3000; while the old building at Jacksonville, which has been occupied for a school of this kind since 1865, accommodates only 104, and yet has on its records over 680 applicants for admission. The great value of schools for this unfortunate class has been fully demonstrated by the institutions established in Massachusetts, New York, Connecticut, Pennsylvania, Ohio, Kentucky, and Georgia.

The committee of the state society has done its work well, and no more meritorious subject will be brought to the attention of the legislature during its present session. The following is from the report of the State Board of Commissioners on Public Charities.

The Institution for Feeble-minded Children renews this winter the application made two years ago, for an appropriation of $200,000, of which $25,000 is for the purchase of a site, and $175,000 for the erection of a building designed to accommodate not less than 250 pupils.

Of this enterprise the board say "There is no enterprise of a charitable nature in the state of Illinois which commends itself more to our sympathies than this. It seems to have been regarded by the legislature hitherto, like Bethlehem Ephrata of old, a 'little one among the thousands of Judah,' and it has been compelled to wait for its establishment upon a permanent basis until the very last. It was organized in 1865, as an experiment, under the control of the directors of the Institution for the Education of the Deaf and Dumb. In 1871, the people of the state, by their representatives, granted it an independent existence and a charter. But it still occupies leased property in the city of Jacksonville, for which it pays an annual rental of $1,000. The group of cheap wooden buildings which has sprung up around the old Duncan mansion, in which the superintendent and officers reside, is a perfect tinderbox, exposed every hour to the danger of taking fire from the stoves by which the premises are heated. Should such an accident occur, the entire structure would burn to the ground, under favorable circumstances, in fifteen minutes; and in all human probability some of the unfortunate inmates would perish miserably in the flames. Even if this were not so, the purely temporary and very inconvenient character of the accommodations, which are inad-

equate for the reception of more than one hundred pupils, greatly increases the aggregate as well as the *per capita* cost of the institution. It has been often and truly said that the enterprise should either be provided with better quarters or abandoned altogether. A careful observation of its practical working, during the past six years, has satisfied us of its utility and value. We have never had a doubt that the general assembly would, at some day, make a building appropriation for the benefit of the idiot school. We hope that it will do so this winter. The application for $175,000 is based upon an actual plan by an architect of ability, and upon actual estimates of cost of construction, in accordance with said plan. The sum of $25,000 for the purchase of land will perhaps not appear excessive when it is considered that the institution needs a farm of large area, both for the pasturage of cows (these children consume a great quantity of milk) and to furnish a means of physical development and practical education of the boys by farm labor, and that this farm must be adjacent to or not far from some large town."

HEALTH OF PUBLIC REFORMATORIES.—At a recent meeting of the State Board of Health of Michigan, Dr. R. E. Kedzie reported the results of his examination of the different reformatory institutions of that state, with special reference to their ventilation and water supply. It is stated, that in all of them, he found the ventilation bad, the air yielding from fourteen to thirty-two parts of carbonic acid gas in ten thousand parts of air, and the water more or less foul. It is to be hoped that his recommendations of legislative action will be speedily complied with by the lawmakers of that state.

Society Reports.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, JANUARY 11, 1875.

Reported by R. E. Starkweather, M.D.

DR. JOHN BARTLETT, President, in the chair.

TUMOR OF DENTINE.

Dr. Andrews reported a case of unusual interest and rarity, and accompanied the same with an exhibition of a microscopical preparation of a portion of the material removed, furnished him by Dr. Curtis.

A writer in the recent edition of Holmes' Surgery, cites, and knows only of twelve cases of tumor of dentine, of which only six are of this kind. Dr. Andrews had heard of but one case in this city similar to his.

Dental tumors are of two sorts. The first is a simple deformity of the tooth, its structure not being changed.

The second sort is where the teeth depart from the normal structure altogether; generally, the molar teeth are the ones thus affected and deformed.

The patient, a lady of eighteen years of age, exhibited a swelling on the side of the jaw, where the wisdom tooth should have presented itself, very much as though a projecting bony tumor had been produced by a simple periostitis. A few months after having first seen the patient, the tumor or cyst began to suppurate, and it was at once incised. Upon probing, something like dead bone was felt, and the prominent point of the tumor had ulcerated through the gum. The patient having been anæsthetized, a longitudinal incision was made along the gum, and ineffectual attempts made to extract a supposed tooth. At length, by using a pair of curved gouge forceps, a fragment was broken off. In this manner, most of the then projecting portion of tumor was removed, and carbolated lotions ordered. Eight weeks later, there had been a slight loosening of the mass, and a little elevation thereof; and under anæsthesia, by using the tooth forceps, a rounded, tuberous body was removed from the cavity where a tooth should have been, which, on examination, proved to be composed of dentine. Its length was an inch and a quarter, and its thickness half an inch.

SARCOMA AND CARCINOMA.

Dr. Andrews made some remarks as to the clinical history of the sarcoma and carcinoma, their differential diagnosis, microscopical and physical, illustrating the same by reports of cases, and by microscopical specimens and drawings, prepared and furnished by Dr. Curtis, of carcinoma of the breast. He related three cases, microscopical specimens of which were prepared and displayed to the society by Prof. Curtis. The first was a sarcoma from a patient who had five such tumors, and recently died of erysipelas and peritonitis. Two of the tumors had been excised and returned, but there was no infection of the lymphatic glands. The second case was a carcinoma of the uterus, which Prof. Curtis diagnosed by the microscope during the life of the patient. The subsequent history and death confirmed his diagnosis. The third case was a carcinoma excised, by Prof. Andrews, from the side of the foot nearly two years ago. It has not yet returned.

Incidentally, Dr. Andrews remarked that it seemed to him that there were more cases of cancerous growths in northern Wisconsin, than in regions south of us; that consumption and cancer often prevailed in the same climates, and were more abundant the nearer one approaches to the sea coast of this country; and at equal distances from the sea, statistics show that they are more common at the north and less frequent as we go south.

HISTOLOGY OF CARCINOMA.

First, there is a fibrous frame-work in which are impacted a quantity of small, round cells, that is to say, bands of fibres interlace and leave lacunæ, and these are packed full of rounded cells. The best histologists consider these lacunæ to be lymphatic spaces, lined with the same endothelium as the lymphatic vessels, and constituting, in fact, a part of the lymphatic

system. Hence the round cancer cells are contained in the interior of the lymphatic cavities, and, being easily detached from each other, whenever any of them become loose they float along the absorbent vessels until they are stopped at the first set of lymphatic glands. There they grow and produce another cancer. This is the reason why carcinoma regularly infects the absorbent glands. A characteristic of these cells in carcinoma is, that they can be easily brushed out, leaving the cavities or lacunæ empty—they can thus be easily conveyed through the body.

There is a certain class of tumors hard to destroy, called the sarcoma or flesh tumor. A few weeks ago, a woman, eighteen years of age, presented herself to me for treatment, upon whom there were several of these growths. They had been enlarging and increasing for upwards of two years. A year ago, two had been removed, but both returned, and one became larger than it had previously been. The tumors were from the size of a hazel nut to two inches in diameter — hard, not painful — the neighboring lymphatic glands were normal in every respect. There were two on the right thigh, but the inguinal glands were sound; there was one tumor in the left inguinal region of the abdomen, and suppurating. In every case, the lymphatic glands were perfectly normal, for sarcoma does not develop in the lymphatic spaces. Its cells are outside of them, hence are not taken into the absorbents. The cells of the sarcoma adhere more closely to each other than do those of carcinoma; they are spindle-shaped, and more like a fibroid tumor, so that it is sometimes hard to distinguish between sarcoma and fibroid tumors.

The sarcoma, unlike the carcinoma, has no frame-work apart from the cells. As a general rule, a diagnosis can be made between carcinoma and sarcoma. The hope of cure by excision, is greater in the latter than in the former.

Dr. Hyde thought it a difficult point as to whether a medullary sarcoma might not be considered cancerous. It was somewhat remarkable that in a recent discussion on cancer, in New York, Dr. Willard Parker had said that cancer was no longer to be considered as hereditary; that it often occurred in families with no previous history of cancer.

Dr. Curtis thought that there was a difference between sarcoma and carcinoma; the former throughout is made up of similar tissue—the latter is made up of entirely different elements. The colloid material is a degeneration of cancerous material, just as cancer may undergo fatty degeneration. The colloid is a transformation; it is an exaggerated species of cancer, the cells greatly dilated. In cancer, there is no shading off of the cells into the fibrous tissue. The term cancer, like that of consumption, has been abandoned by some authors —it is too general an expression.

After further discussion by Drs. Simon, Hyde, Merriman and Andrews, the society adjourned.

EDITORS CHICAGO MEDICAL EXAMINER: — The Physicians and Surgeons of Will County, Illinois, met at the office of Dr. A. W. Heise, in Joliet, on January 5th, 1875, and organized "The Will County Medical

Society," by adopting a Constitution and By-Laws, in conformance with the Constitution of the State Medical Society.

Fourteen regular physicians became permanent members.

The officers elected for the current year, are A.W. Heise, M.D., of Joliet, President; E. R. Willard, M.D., of Wilmington, Vice-President; Censors, Geo. C. Raynor, M. D., of Joliet, Chas. H. Bacon, M.D., of Lockport, D. J. Merriman, M.D., of Wilmington; William Dougall, M.D., of Joliet Secretary and Treasurer.

Drs. Speer and Abbott were elected Honorary Members.

Drs. Bacon and Mitchell were appointed to read essays at the next regular meeting.

Regular Meetings are held quarterly, in Joliet, on the first Tuesday of each quarter.

WILLIAM DOUGALL, M.D.,
Secretary.

JOLIET, Ill., Jan. 11, 1875.

Gleanings from Our Exchanges.

ON THE HAND-FEEDING OF INFANTS.

BY EUSTACE SMITH, M.D., LONDON.

THERE are few subjects of greater interest, or of which it is more important, in a sanitary sense, to possess an accurate knowledge than that which relates to the feeding and nurture of infants. Many mothers are unable to nurse their babies, and there is an increasing dislike to transfer maternal duties to a hireling; consequently, the question how best to provide a fitting diet for a being whose digestive powers are feeble and immature, but whose growth and healthy development are dependent upon a suitable supply of nourishment, is one to which it is of the utmost importance to furnish a correct answer.

The mortality among children under the age of twelve months is enormous; and of these deaths, a large proportion might be prevented by a wider diffusion of knowledge, of one of the least difficult of subjects. The rules for the efficient nourishment of infants, are plain and simple and the application of them, although requiring tact and judgment, is yet not a matter which ought to occasion any extraordinary embarrassment.

The great principle at the bottom of all successful feeding—viz., that an infant is nourished in proportion to his power of digesting the food with which he is supplied, and not in proportion to the quantity of nutritive material which he may be induced to swallow—is so obviously true, that an apology might almost seem to be required for stating so self-evident a proposition; but experience shows that this simple truth is one which in practice is constantly lost sight of. That that child thrives best who is most largely fed, and that the more solid the food the greater its nutritive power, are two articles of faith so firmly settled in the minds of many persons, that it is very difficult indeed to persuade them to the contrary.

To them wasting in an infant, merely suggests a larger supply of more solid food; every cry means hunger, and must be quieted by an additional meal. To take a common case: A child, weakly perhaps to begin with, is filled with a quantity of solid food which he has no power of digesting. His stomach and bowels revolt against the burden imposed upon them, and endeavor to get rid of the offending matter by vomiting and diarrhœa; a gastro-intestinal catarrh is set up, which still further reduces the strength —every meal causes a return of the sickness; the bowels are filled with fermenting matter, which excites violent griping pains, so that the child rests neither night nor day; after a longer or shorter time, he sinks, worn out by pain and exhaustion, and is then said to have died from "consumption of the bowels."

Cases such as the above are but too common, and must be painfully familiar to every physician who has much experience of the diseases of children. When seen sufficiently early, the treatment of the derangement is simple and the improvement immediate, but it unfortunately often happens, especially among the poorer classes, that application for advice is delayed until the child's strength has been reduced to the lowest point, and all our efforts to remedy the mischief may in such cases prove unavailing.

The disastrous results of ignorant attempts to supply a substitute for human milk, have brought the whole practice of hand-feeding into disrepute; but if a food be judiciously selected, with a correct appreciation of infant wants, and an accurate estimate of infant powers of digestion, there is no reason why a child fed artificially, with judgment, should not thrive as well as one suckled naturally at his mother's breast. The food we select for the diet of an infant should be nutritious in itself, but it should also be given in a form in which the child is capable of digesting it, otherwise we may fill him with food without in any way contributing to his nutrition, and actually starve the body, while we load the stomach to repletion. No food can be considered suitable to the requirements of the infant, unless it not only possesses heat-giving and fat-producing properties, but also contains material to supply the waste of the nitrogenous tissues; therefore, a merely starchy substance, such as arrowroot, which enters so largely into the diet of children, especially among the poor, is a very undesirable food for infants, unless given in very small quantities, and mixed largely with milk.

The most perfect food for children, the only one, indeed, which can be trusted to supply in itself all the necessary elements of nutrition, in the most digestible form, is milk. In it are contained nitrogenous matter in the curd, fat in the cream, besides sugar, and the salts which are so essential to perfect nutrition. The milk of different animals varies to a certain extent in the proportion of the several constituents, some containing more curd, others more cream and sugar; but the milk of the cow, which is always readily obtainable, is the one to which recourse is usually had, and when properly prepared, this is perfectly efficient for the purpose required. Cow's milk contains a larger proportion of curd and cream, but less sugar, than is found in human milk, and these differences can be immediately remedied by dilution with water, and the addition of cane or milk sugar in sufficient quantity to supply the necessary sweetness. But there is another and more important difference between the two fluids which must not be lost sight of. If we take two children, the one fed on cow's milk and water, the other nursed at his mother's breast, and produce vomiting directly after a meal by friction over the abdomen, we notice a remarkable difference in the matters ejected. In the first case, we see the curd of the milk coagulated into a firm, dense lump; while in the second, the curd appears in the form of minute flocculent loosely connected granules. The demands made upon the digestive powers in these two

cases is very different, and the experiment explains the difficulty often experienced by infants in digesting cow's milk, however diluted it may be, for the addition of water alone will not hinder the firm clotting of the curd. In order to make such milk perfectly satisfactory as a food for new-born infants, further preparation is required, and there are two ways in which the difficulty may be overcome.

The first method consists in adding an alkali, as lime-water, to the milk. To be of any service, however, the quantity added must be considerable, and one or two teaspoonfuls—the addition usually made to a bottleful of milk and water—is quite insufficient to effect the object desired. Lime-water contains only half a grain of lime to the fluid ounce; of this solution, so small a quantity as two teaspoonfuls would be scarcely sufficient even to neutralize the natural acidity of the milk. But it is necessary to do much more than this. Lime-water, no doubt, acts by partially neutralizing the gastric juice—the rennet naturally existing in the child's stomach—so that clotting of the curd is in great part prevented, and the milk passes little changed out of the stomach to be fully digested by the intestinal secretions in the bowels. To attain this object, at least a third part of the mixture should consist of lime-water. For a new-born infant, two tablespoonfuls of milk may be diluted with an equal quantity of plain filtered water, and then be alkalinized by two tablespoonfuls of lime-water. This mixture, of which only a third part is milk, can be sweetened by the addition of a teaspoonful of milk-sugar. If thought desirable, a teaspoonful of cream may be added. The whole is then put into a perfectly clean feeding-bottle, and is heated to a temperature of about 95° Fahr., by steeping the bottle in hot water; when warmed, it is ready for use. The proportion of milk can be gradually increased as the child gets older.

There is another plan by which the caseine of cow's milk may be rendered digestible; it is by adding to the milk a small quantity of some thickening substance, such as barley-water, isinglass, or even one of the ordinary farinaceous foods. The action of all of these is the same, and is an entirely mechanical one. The thickening substance separates the particles of curd, so that they cannot run together into a solid lump, but coagulate separately into a multitude of small masses. By this means the curd is made artificially to resemble the naturally light clot of human milk, and is almost as readily digested by the infant.

Although any thickening matter will have the mechanical effect desired of separating the particles of curd, yet it is not immaterial what substance is chosen. The question of the farinaceous feeding of infants is a very important one, for it is to an excess of this diet that so many of their derangements may often be attributed. Owing to a mistaken notion that such foods are peculiarly light and digestible—a notion so widely prevalent that the phrase "food for infants" has become almost synonymous with farinaceous matter—young babies are often fed as soon as they are born with large quantities of corn-flour or arrowroot, mixed sometimes with milk, but often with water alone. Now, starch, of which all the farinæ so largely consist, is digested principally by the saliva, aided by the secretion from the pancreas, which convert the starch into dextrine and grape-sugar previous to absorption. But the amount of saliva formed in the new-born infant is excessively scanty, and it is not until the fourth month that the secretion becomes fully established. Again, according to the experiments of Korowin, of St. Petersburg, the pancreatic juice is almost absent in a child of a month old; even in the second month, its secretion is very limited, and has little action upon starch. It is only at the end of the third month that its action upon starch becomes sufficiently powerful to furnish material for a quantitative estimation of the sugar formed. Therefore, before the age of three

months, a farinaceous diet is not to be recommended—is even to be strongly deprecated, unless the starchy substance be given with great caution and in very small quantities. If administered recklessly, as it too often is, the food lies undigested in the bowels, ferments, and sets up a state of acid indigestion, which in so young and feeble a being, may lead to the most disastrous consequences. In fact, the deaths of many children under two or three months old, can often be attributed to no other cause than a purely functional abdominal derangement, excited and maintained by too liberal feeding with farinaceous foods. There is, however, one form of food, which, although farinaceous, is yet well digested even by young infants, if given in moderate quantities. This is barley water. The starch it contains is small in amount, and is held in a state of very fine division. When barley water is mixed with milk in equal proportions, it ensures a fine separation of the curd, and is at the same time a harmless addition to the diet. Isinglass or gelatine, in the proportion of a teaspoonful to the bottleful of milk and water, may also be made use of, and will be found to answer the purpose well.

Farinaceous foods, in general, are, as has been said, injurious to young babies, on account of the deficiency during the first months of life of the secretions necessary for the conversion of the starch into dextrine and grape-sugar—a preliminary process which is indispensable to absorption. If, however, we can make such an addition to the food as will insure the necessary chemical change, farinaceous matter ceases to be injurious. It has been found that by adding to it malt in certain proportions the same change is excited in the starch artificially as is produced naturally by the salivary and pancreatic secretions during the process of digestion. The employment of malt for this purpose was first suggested by Mialhe in a paper read before the French Academy in 1845, and the suggestion was put into practice by Liebig fifteen years later.

"Liebig's Food for Infants" contains wheat flour, malt, and a little carbonate of potash, and has gained a well-deserved celebrity as a food for babies during the first few months of life. The best form with which I am acquainted is that made by Mr. Mellin, under the name of "Mellin's Extract for preparing Liebig's Food for Infants." In this preparation, owing to the careful way in which it is manufactured, the whole of the starch is converted into dextrine and grape-sugar, so that the greater part of the work of digestion is performed before the food reaches the stomach of the child. Mixed with equal parts of milk and water, this food is as perfect a substitute for mother's milk as can be procured, and is readily digested by the youngest infants. It very rarely, indeed, happens that it is found to disagree.

In all cases, then, where a child is brought up by hand, milk should enter largely into his diet, and during the first few months of life he should be fed upon it almost entirely. If he can digest plain milk and water, there is no reason for making any other addition than that of a little milk-sugar and cream; but in cases where, as often happens, the heavy curd taxes the gastric powers too severely, the milk may be thickened by an equal proportion of thin barley-water, or by adding to each bottleful of milk and water a teaspoonful of isinglass or of "Mellin's Extract."

Having fixed upon the kind of food which is suitable to the child, we must next be careful that it is not given in too large quantities, or that the meals are not repeated too frequently. If the stomach be kept constantly overloaded, even with a digestible diet, the effect is almost as injurious as if the child were fed upon a less digestible food in more reasonable quantities. A healthy infant passes the greater part of his time asleep, waking at intervals to take nourishment. These intervals must not be allowed to be too short, and it is a great mis-

take to accustom the child to take food whenever he cries. From three to four ounces of liquid will be a sufficient quantity during the first six weeks of life; and of this only a half or even a third part should consist of milk, according to the child's powers of digestion. After such a meal the infant should sleep quietly for at least two hours. Fretfulness and irritability in a very young baby almost always indicate indigestion and flatulence; and if a child cries and whines uneasily, twisting about his body and jerking his limbs, a fresh meal given instantly, although it may quiet him for the moment, will, after a short time, only increase his discomfort. During the first six weeks or two months, two hours will be a sufficient interval between the meals; afterwards this interval can be lengthened, and at the same time a larger quantity may be given at each time of feeding. No more food should be prepared at once than is required for the particular meal. The position of the child as he takes food should be half reclining, as when he is applied to his mother's breast, and the food should be given from a feeding-bottle. When the contents of the bottle are exhausted, the child should not be allowed to continue sucking at an empty vessel, as by this means air is swallowed, which might afterwards be a source of great discomfort. The feeding apparatus must be kept perfectly clean. The bottle should be washed out after each meal in water containing a little soda in solution, and must then lie in cold water until again wanted. It is desirable to have two bottles, which can be used alternately.

At the age of six months farinaceous food may be given in small quantities with safety, if it be desired to do so; and in some cases the addition of a moderate proportion of wheaten flour to the diet is found to be attended with advantage. The best form in which this can be given is the preparation of wheat known as "Chapman's entire wheaten flour." This is superior for the purpose to the ordinary flour, as it contains the inner husk of the wheat finely ground, and is therefore rich in phosphates and in a peculiar body called cerealin, which has the diastatic property of changing starchy matters into dextrine. This flour should be slowly baked in an oven until it crumbles into a light grayish powder. At first no more than one teaspoonful should be given once or twice a day, rubbed up (not boiled) with milk. If there be much constipation, fine oatmeal may be used instead of the baked flour.

After the eighth month a little thin mutton or chicken broth or veal tea may be given, carefully freed from all grease. After twelve months the child may begin to take light puddings, well-mashed potatoes with gravy, or the lightly boiled yolk of an egg; but no meat should be allowed until the child be at least sixteen months old. Every new article of food should be given cautiously, and in small quantities at first, and any sign of indigestion should be noted and a return be made at once to a simpler method of feeding.

During all this time the child should be kept scrupulously clean, and his nursery should be well ventilated and not be kept too hot. He should be washed twice a day from head to foot, once with soap. The air of his bedroom should be kept sweet and pure during the day, and at night, if the weather does not allow of an open window, a lamp placed in the fender will insure of a sufficient exchange of air. The child should pass as much of his time as possible out of doors, and while every care is taken to guard his sensitive body against *sudden* changes of temperature, he must not be covered up with too heavy clothing and shut off from every breath of air for fear of his catching cold. A child ought to lie cool at night, and the furniture of his cot, although sufficiently thick to insure necessary warmth, should not be cumbersome, so as to be a burden. If the above directions are carefully carried out—and the mother should herself see

that they are attended to—few cases will be found to present any difficulty in their management. Exceptional cases, however, are sometimes met with where special sources of embarrassment may arise. These I propose to consider in a future paper.—*Sanitary Record.*—*The Sanitarian, Jan.*, 1875.

THE PHYSIOLOGY OF VERSIFICATION—HARMONIES OF ORGANIC AND ANIMAL LIFE.

By Oliver Wendell Holmes, M. D.

From The Boston Medical and Surgical Journal.

WE are governed in our apparently voluntary actions by impulses derived from many obscure sources which act upon us almost without our cognizance. The digestive system legislates largely for our habits, bodily and mental, and its condition has no insignificant effect upon our intellectual and spiritual states. We are commanded to a considerable extent by our idiosyncrasies and infirmities. The secret of our diversities as social beings lies far more in our peptic capacities, in our indifference to exposure or liability to suffer from it, in our sensibility to cold and heat or to the air of ill-ventilated rooms, in the varying amount of sleep we require, in the degree of ability to bear strong light, in the quickness or dullness of our hearing, in the greater or less degree of fatigue induced by the standing posture, and in the demands of internal organs which have a will if not a voice of their own, than our friends who call us good companions or otherwise are always ready to believe.

There are two great vital movements pre-eminently distinguished by their rhythmical character,—the respiration and the pulse. These are the true time-keepers of the body; having a constant relation in health, the proportion being, as Mr. Hutchinson has shown, one inspiration to every four beats of the heart. It is very easy to prove that the first of these rhythmical actions has an intimate relation with the structure of metrical compositions. That the form of verse is conditioned by economy of those muscular movements which ensure the oxygenation of the blood is a fact which many have acted on the strength of without knowing why they did so.

Let us look first at the natural rate of respiration. Of 1817 individuals who were the subject of Mr. Hutchinson's observations, "the great majority (1731) breathed from sixteen to twenty-four times per minute. Nearly a third breathed twenty times per minute, a number which may be taken as the average." *

The "fatal facility" of the octosyllabic measure has often been spoken of, without any reference to its real cause. The reason why eight syllable verse is so singularly easy to read aloud is that it follows more exactly than any other measure the natural rhythm of respiration. In reading aloud in the ordinary way from The Lay of the Last Minstrel, from In Memoriam, or from Hiawatha, all written in this measure, the first two in iambics, or short-longs, the last in trochaics or long-shorts, it will be found that not less than sixteen nor more than twenty-four lines will be spoken in a minute, probably about twenty. It is plain, therefore, that if one reads twenty lines in a minute, and naturally breathes the same number of times during that minute, he will pronounce one line to each expiration, taking advantage of the pause

* Flint's Physiology, i, 391.

at its close for inspiration. The only effort required is that of vocalizing and articulating; the breathing takes care of itself, not even demanding a thought except where the sense may require a pause in the middle of a line. The very fault found with these octosyllabic lines is that they slip away too fluently, and run easily into a monotonous sing-song.

In speaking the ten syllable or heroic line, that of Pope's Homer, it will be found that about fourteen lines will be pronounced in the minute. If a breath is allowed to each line the respiration will be longer and slower than natural, and a sense of effort and fatigue will soon be the consequence. It will be remembered, however, that the *cæsura*, or pause in the course of the line, comes in at irregular intervals as a "breathing-place," which term is its definition when applied to music. This gives a degree of relief, but its management requires care in reading, and it entirely breaks up the natural rhythm of breathing.

The fourteen syllable verse, that of Chapman's Homer, the common metre of our hymn-books, is broken in reading into alternate lines of eight and six syllables. This also is exceedingly easy reading, allowing a line to each expiration, and giving time for a little longer rest than usual at the close of the six syllable line.

The twelve syllable line, that of Drayton's Polyolbion, is almost intolerable, from its essentially unphysiological construction. One can read the *ten* syllable line in a single expiration without any considerable effort. One instinctively divides the *fourteen* syllable line so as to accommodate it to the respiratory rhythm. But the *twelve* syllable line is too much for one expiration and not enough for two. For this reason, doubtless, it has been instinctively avoided by almost all writers in every period of our literature.

The long measure of Tennyson's Maud has lines of a length varying from fourteen to seventeen syllables, which are irregularly divided in reading for the respiratory pause. Where the sense does not require a break at some point of the line we divide it by accents, three in each half, no matter what the number of syllables; but the breaks which the sense requires so interfere with the regularity of the breathing as to make these parts of Maud among the most difficult verses to read aloud, almost as difficult as the Polyolbion.

It may be said that the law of relation here pointed out does not apply to the *writing* of verse, however it may be with regard to reading or declaiming it. But the early poems of a people are recited or sung before they are committed to writing, and even if a versifier does not read aloud as he writes, he mentally articulates every line, and takes cognizance instinctively of its physiological adjustment to respiration as he does of its smoothness or roughness, which he hears only in imagination.

The critical test of poetry by the stop-watch, and its classification according to its harmonizing more or less exactly with a great vital function, does not go very far, but it is quantitative and exactly scientific so far as it does go. The average reader will find on trial that the results given above are correct enough to justify the statements made. But here, as in astronomical observation, we must not forget the personal equation. An individual of ample chest and quiet temperament may breathe habitually only fourteen times in a minute, and find the heroic or iambic pentameter, —the verse of Pope's Homer and Gray's Elegy,—to correspond with his respiratory rhythm, and thus to be easier than any other for him to read. A person of narrower frame and more nervous habit may breathe oftener than twenty times in a minute, and find the seven syllable verse of Dyer's Grongar Hill fits his respiration better than the octosyllables of Scott or Tennyson or Longfellow. A quick-breathing little child will learn to recite verses of two and four syllables, like the story of the couple whose predilections in favor of azotized and

non-azotized diet are recorded in our nursery classic, and do it easily, when it would have to catch its breath in the middle of lines of six or seven syllables.

Nothing in poetry or in vocal music is widely popular that is not calculated with strict reference to the respiratory function. All the early ballad poetry shows how instinctively the reciters accommodated their rhythm to their breathing. Chevy Chace or The Babes in the Wood may be taken as an example for verse. God save the King, which has a compass of some half a dozen notes and takes one expiration, economically used, to each line, may be referred to as the musical illustration.

The unconscious adaptation of voluntary life to the organic rhythm is perhaps a more pervading fact than we have been in the habit of considering it. One can hardly doubt that Spenser breathed habitually more slowly than Prior, and that Anacreon had a quicker respiration than Homer. And this difference, which we conjecture from their rhythmical instincts, if our conjecture is true, probably, almost certainly, characterized all their vital movements.

It seems not unlikely that other organic rhythms may be found more or less obscurely hinted at in the voluntary or animal functions. How far is *accent* suggested by or connected with the movement of the pulse, every stroke of which, if it does not lift the brain, as Bichat taught, sends a shock through its whole substance, and compresses it in its unyielding case? It is worth nothing that twenty acts of respiration mean eighty arterial pulsations, and that twenty octosyllabic lines corresponding to these eighty pulsations have exactly eighty accents. Again, there is a singular coincidence between the average pulsations of the arteries and the number of steps taken in a minute; and as we hurry our steps, the heart hurries to keep up with them. They sometimes correspond so nearly that one is reminded of the relation between the steam-chest, with its two alternately opening valves, and the piston with its corresponding movements, as we see it in the steam-engine. The doctrine of Bichat referred to above has been combated on the ground that the closely imprisoned brain could not be lifted; but the forcible impact of the four columns of arterial blood is none the less real in the normal condition than when the brain is seen to be raised through an accidental opening in the skull. So, also, notwithstanding the gradual equalization of the cardiac impulse, this impulse must be felt very extensively throughout the body. We see that it can lift a limb through a considerable space when we happen to sit with one leg crossed over the other. It is by no means impossible that the regular contractions of the heart may have obscure relations with other rhythmical movements more or less exactly synchronous with their own; that our accents and our gestures get their first impulse from the cardiac stroke which they repeat in visible or audible form. In these funeral marches which our hearts are beating, we may often keep step to the cardiac systole more nearly than our poet suspected. But these are only suggestions to be considered and tested; the relations of verse to the respiratory rhythm will be easily verified and extended by any who may care to take the trouble.

A WARNING to Doctors is issued by the *San Francisco News Letter*, which announces its intention in future of publishing after each death-notice the name of the attending physician. — *American Medical Weekly.*

SMALL-POX EPIDEMICS. — From advices in the public prints it appears that small-pox prevails to a considerable extent in New York City. — *Med and Surg. Rep.*

A CASE OF SUPPOSED HYDROPHOBIA.

From the Carlinville, Ill., Democrat.

THE following article relating to the recent case of *supposed hydrophobia* in this city, was read before the County Medical Association at Shipman on Tuesday, by Dr. J. P. Matthews, of this city, and will no doubt interest many of our readers:

Not so much on account of any peculiar friendship for the poor canine race does this report appear, as a duty incumbent upon every physician to point out to the human family all forms of physiological and hygienic errors wherever or whenever they may occur. This is especially true, when observed by a practitioner of medicine to occur in the families with whom he stands in the relation of family physician. My professional friends will probably feel sufficiently interested to give the views expressed a brief attention.

A case simulating and in some respects resembling hydrophobia has recently occurred in our city, which many, unacquainted with the pathology of the disease, believe to have been a true case of the dreaded malady. The case in the son of Mr. Shay, came first under the observation of the writer as his family physician soon after the inception of what were peculiar nervous phenomena, but a careful inquiry as to the dog that had bitten the boy six weeks previous, revealed the fact that he was not only then, but had been in excellent health. This, together with the fact that the boy could not only drink water, but was relieved from the paroxysms by the application of cold water to his head, precluded in the writer's mind the possibility of its being a case of hydrophobia. For this opinion expressed to the friends, the writer was discharged and others attended, whose diagnosis and prognosis were more in unison with the boy's surroundings.

The opinion, that it was a species of delusional insanity, supervening upon the biting of a healthy dog, six weeks previous, which again attacked but did not bite him, four weeks subsequent to the biting, all occurring too, upon the arrest of a chronic discharge from one ear, the latter giving rise to an irritation of the brain and nervous system, has been undoubtedly confirmed by the sequel of the case. A careful report which embodied the above opinion, was sent by the writer to Prof. William A. Hammond, of New York, than whom, no man living to-day, stands higher upon diseases of the mind and nervous system. His opinion, which was requested, is herewith appended:

Jan. 10th, 1875.

Dear Doctor: The case you describe is undoubtedly one of hysterical or imaginary hydrophobia, many cases of which occur here every year.

There is not a single element of real hydrophobia about it.

Your view of the case does not differ in any respect to mine.

Yours, Respectfully,

WILLIAM A. HAMMOND.

The report was submitted to Prof. Hammond because he has, in the last year, in his careful and profound investigations of the nervous system, made the disease under consideration a special study, and it must not be forgotten, that he in his report to the New York Neurological Society, was the first to point out an actual lesion in the root of the spinal chord (medulla oblongata) produced in the cases of death caused by hydrophobia.

The secondary cause, then, or the cause of the pathological phenomena of the disease has been discovered by scientific research; but the peculiar principle or virus—the inoculation into the circulation, of which produces it, science as yet fails to point out. This principle or poison that exists upon the teeth of the rabid animal,

acts as specifically upon the medulla oblongata as that of small-pox upon the skin, diphtheria upon the throat or cholera upon the intestinal canal, and when that virus is not present a symptom resembling it, is no more hydrophobia than tetter or acne is small-pox, a sore throat from cold is diphtheria, or a mere diarrhœa is cholera. A conclusion in the above case was reached from this course of reasoning, and was regarded sufficient without the symptoms as they appeared, inasmuch as the boy was bitten by a perfectly healthy dog.

The authors upon the subject, at the writer's command, are of no less note than Watson, Aitkin, Flint, Williams, Hartshorne, etc.; all give the particular symptoms to be "severe constriction about the throat; spasmodic action of the diaphragm and a particular distress at the stomach, all of which are aggravated or brought about by attempts to take liquids, or by the least breath or current of air on the surface of the body, which produces in the first instance an effect resembling that produced upon stepping into a cold bath. Tenacious and clammy mucus issues from the mouth, paroxysms of frenzy or uncontrollable, impulsive violence (rabidity) supervene. The duration of the disease varies from three to six or seven days, the greater number of cases terminating in death on the second and fourth days from the accession of the symptoms. Death is generally sudden and unexpected at the moment."

The authors also agree that the first stage of hydrophobia is ushered in by the patient's attention being aroused by a numbness extending from the base of the brain to the wound, which, if it occurs in the hand or foot, often produces a tremulous feeling, slight fever and headache, which last but a short time before the hydrophobic stage begins.

In the case under consideration, restlessness at night and dreaming of dog constituted the nervous symptoms that occurred before the paroxysms, and even with a pain in the side of the forehead, which has been accounted for in the arrest of the purulent discharge from the ear, the writer could not at this time see any reason for forming so grave a diagnosis.

The authors also agree that the second or hydrophobic stage is ushered in as the word implies, with a great difficulty, if not an utter impossibility of swallowing liquids, a symptom also not present in Mr. Shay's boy. In fact the only real symptom of the malady that occurred was the snapping and frothing at the end of the paroxysms which the writer has seen, and do occur in prolonged epileptic fits.

This, then, could not have been a case of hydrophobia; inasmuch as science teaches us that it is a result of a specific poison introduced into the circulation.

Dr. Condie, in a note in his edition of Watson's Practice, says that many well authenticated cases are on record in which disease having all the pathognomonic symptoms of hydrophobia occurred without the slightest evidence of having been bitten by a rabid animal, but this was written years before the above referred to investigations were made upon the subject; and Youatt, in a pamphlet upon hydrophobia, believes it to be communicable only by the dog, the fox, the wolf, jackal and cat.

A bite from a healthy dog then, is no more to be feared than any other contused wound; but if the dog is suspected with having the disease, cauterize the wound freely with caustic potash, or lunar caustic, or what would be still safer, immediately excise the part with a knife. This is recommended as the safest preventive. As to curative agencies, the writer is sorry that science as yet offers but little relief. This fact makes the cases fit pabulum for snapping doctors, magic and mad-stones, the latter of which is given as an ancient tradition by Dr. Charles P. Russell, in an article on some superstitions on hydrophobia in the December number of the *Popular Science Monthly*. He refers in his article to

the superstition relative to dog-days, the cutting a worm from beneath the dog's tongue, and biting off the dog's tail, both operations to be performed in puppyhood, to prevent the mature dog from going mad.

He says "The ancients ascribe peculiar virtues to a variety of stone called *ammonis cornu*, which was supposed to possess the property of extracting the virus from wounds inflicted by mad dogs or venomous reptiles. Pliny alludes to it under the above name, and it has since received the appellation ammonite, both terms referring to its resemblance in shape to the horns which surrounded the head of Jupiter Ammon. It has also in more modern times been popularly known as the mad-stone and the snake-stone. Scientifically speaking, it is the fossil petrifaction of an extinct mollusk, closely resembling nautilus, having a spiral, symmetrical and chambered shell, ranging in size from that of a small bean to that of a large cart-wheel. In the East Indies and China, it has for ages enjoyed the reputation mentioned."

And after speaking, as a hocus-pocus, of a Chinese snake-stone that was brought to this country about A. D. 1740, he says: "These wonderful stones doubtless still exist with virtues unimpaired—a profitable inheritance for those whose privilege it is to bestow their inestimable boon upon credulous humanity."

Dr. Seaman.—I saw the Shay case referred to in the report, and also the so-called mad-stone. It is a hornblende prepared stone. Does not appear porous; of a bluish color and striated. It did not stick sufficiently to prevent it falling by its own weight. The hand was the part it was applied to, and when the hand was allowed to turn to one side the stone would roll off. Its sticking is purely mechanical. I endorse the views embodied in the report.

I had a case like the one referred to, occurring in a fitty family, which was supposed by the friends to be hydrophobia, but was hysteria. The case lived, but had many attacks

Dr. Wm. C. Day.—I saw a mad stone which was exhibited to th medical class in St. Louis, the keepe of it being present. It was white about half as large as a turkey egg very porous, finely polished, chalk appearance. It was kept in wax Prof. J. T. Hodgen made it the subject of a lecture. Said it was one o the humbugs of medicine; that it sticking is purely mechanical, depend ing on adhesion and capillary attrac tion, and not on any affinity for the poison.

Dr. Harris.—I have seen the stone referred to by Dr. Seaman. It is essentially as he described it.

Dr. A. B. Penniman.—Gave a verbal report of a case of unusual nervous trouble occurring in a person who had been bitten by a dog, severa years before. The attacks, which were called "mad-fits" by the friends occurred about three times annually at irregular intervals. I did not believe it to be hydrophobia.

Dr. Matthews.—It will be remembered the stone referred to by Dr. Seaman, was applied in a case of *true* hydrophobia, in Carlinville, a few years ago. The patient was a German, whose name I have forgotten, but was a patient of Dr. DeLieu's. The man died in a few days.

Other opinions were expressed, which were about as follows:

That there are cases of hydrophobia there is no doubt, but they occur much less frequently than people suppose. The mad-stone is a traditional superstition, like dog-days, the signs of the Zodiac as controlling the circulation of the blood, etc., having no facts in science to support them.

The meeting of the Society was well attended. Many subjects of importance were discussed; most conspicuous was an essay on Cerebro-Spinal Fever.

Society adjourned to meet in Carlinville, third Tuesday in April next.

B. M. WILSON, Sec'y.

A. C. CORR, Sec'y *pro tem.*

PARALYSIS OF THE ACCOMMODATION OF THE EYE, FOLLOWING AN ATTACK OF DIPHTHERIA.

By P. A. Callan, M.D., Assist. Surgeon New York Eye Infirmary.

THE two cases here presented, occurred in the service of Dr. Henry D. Noyes, at the N. Y. Eye and Ear Infirmary. Considering the large amount of diphtheria in the city at present, and the few cases of eye complications seen in the present epidemic, we think they may be of interest to the profession.

Mary L., age 11, Patterson, N. J. The patient, about the middle of September, had an attack of diphtheria, from which she apparently recovered, and she enjoyed perfect health up to the first of November, when she complained of not being able to see distinctly any object, being blurred and hazy, so that she was obliged to discontinue going to school. The mother of patient noticed about the same time, that she spoke through her nose, and quite indistinctly, having an impediment in her speech, as the mother designated it. This condition of affairs having remained unchanged, she was brought to the city, November 16, when she came under our observation for the first time. Patient's physique, fair; when spoken to, she readily responded, but her pronunciation was quite defective, and she spoke through her nose. Tongue and pharynx normal in appearance; the uvula quite long; and when patient was made to articulate, it moved very slightly. Patient had some difficulty in swallowing. The pupils of both eyes were slightly dilated; the vision of both eyes was $\frac{20}{70}$ with glasses + $\frac{1}{20}$ vision = $\frac{2}{20}$. At a distance of ten inches, she could not see ordinary print, and it was with difficulty, that she managed to make out Snellen $6\frac{1}{2}$, at the ordinary reading distance, which should be read at $6\frac{1}{2}$ feet, but with her proper correcting convex glass, she could read with comparative ease.

Ophthalmoscope showed a hypermetropic build of eye and a normal fundus. Patient had a hyperm etropic of $\frac{1}{20}$.

Treatment.—Tonics, with local applications of electricity. November 30, patient's vision has very much improved, but the voice remains much the same. Prognosis very good.

Joseph M., age $4\frac{1}{2}$ years, N.Y. City. Patient had an attack of diphtheria about October 1st, from which he slowly recovered. About five weeks from his attack, the mother noticed that he could not see small objects which were in close proximity: small playthings for instance, would fall out of his hands and he could not find them —distant objects on the other hand were seen. At the same time, he had hemiplegia of the left side, with partial ptosis of the left eye.

Nov. 19.—The patient came under our observation for the first time, when we found paralysis of acc. in addition to the others just mentioned. Ophthalmoscopic examination showed the eye to be hypermetropic in build, and the fundus perfectly normal. Patient was treated as case No. 1.

Nov. 27.—Vision and ptosis much improved; hemiplegia much the same. —*N. Y. Med. Record.*

Dr. Mary Putnam Jacobi, during the recent meeting of the New York Pathological Society, temporarily occupied the chair during the presentation of a specimen by the President This is one way of answering the question of women's rights in medicine.—*N. Y. Med. Record.*

HINDRANCES TO VACCINATION.—It is of the first importance to uniform success of the practice of vaccination that the vaccinator shall be possessed of a special skill and knowledge of the subject. The physician must have acquired particular practical knowledge and an acquaintance, not only of the true genuine vaccination in all its regular stages, but he must be able to detect the least variation from the normal course at every stage. Vaccinators in Great Britain are required to stand an examination as to their qualifications before receiving an appointment. It is apprehended that great advantage would accrue to the people if the same rule were in existence in the United States.

It is the conviction of not only every medical man, but of every intelligent citizen, that a properly performed and successful vaccination, whether with humanized or animal virus, is as complete a protection against small-pox now as it ever was, and is a more perfect prophylactic than we possess against any other known disease. But it is of the highest importance, and a prerequisite to success, that the vaccinator obtain virus of unquestionable purity. The particular mode of introducing the virus perhaps makes but little difference in the result, provided no undue injury is done to the tissue, and the lymph, or dissolved crusts, are brought in direct contact with the absorbents, although the shape of the resulting vesicle may depend somewhat upon the particular operation. The thumb lancet is the best instrument to use.

Insusceptibility to vaccination is rare. Failure to induce vaccination, is more frequently the fault of the virus used, or of the operator. In reference to transmitting diseases in vaccine matter, Marson, who has vaccinated over fifty thousand individuals, "has never seen other diseases communicated with vaccine disease, nor does he believe in the popular reports that they are so communicated." Spurious vaccination has been found to pervert or greatly embarrass subsequent successful vaccination. Thus it is necessary to secure good and complete primary vaccination. It is probable that a fruitful cause of insufficient vaccination in the United States, originates from the want of quantity rather than defective quality of the vaccine fluid.—*J. M. Toner, M.D., American Public Health Association*, 1874.—*The Sanitarian.*

ADIPOCERE.—During the past summer, an example of the conversion of the tissues of the body into that spermaceti-like substance known as adipocere occurred in the body of a woman which had been dredged from the Thames, in London, after having been embedded in the mud for an unknown period—probably two or three years. Upon rapping, the body was hard and perfectly resonant, and the whole of the internal organs were converted into a solid mass, which, like the rest of the body, when cut into, had the appearance and consistence of hard, discolored wax. One leg was absent, having, probably, been separated by the weight of the mud when the body was pulled up by the dredger.—*N. Y. Med. Record.*

INFLUENCE OF A PROPER DRAINAGE AND WATER SUPPLY UPON THE MORTALITY OF A TOWN.—In the twelve years immediately preceding the completion of the drainage and water supply system of Salisbury, England, the yearly mortality amounted to 27 per 1,000. During the twelve years following, the mortality fell to 20 per 1,000; and during the last three years, it was only 17 per 1,000. During the latter period, typhoid fever was almost unknown, and the cholera, which in 1849, or before these changes had been made, was fatal in nearly 200 cases—was only fatal in 14 cases in 1854, the time at which the works were under completion. In 1866, there was not a single case in the town.—*Geigel's Offentl. Gesundheitspflege.*

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UPON THE MANAGEMENT OF THE THIRD STAGE OF LABOR.

READ BEFORE THE SOCIETY OF PHYSICIANS AND SURGEONS JAN. 25TH, 1875, BY PROF. H. P. MERRIMAN, M. D.

THERE are so many dangers connected with the puerperal state of women that it becomes us as physicians to examine carefully and see to what extent they may arise from an unsatisfactory completion of some stage of labor, since any trouble is more easily remedied when once its origin is well understood.

The accidents most dreaded after the birth of the child are: Inversion of the uterus (rare); Hæmorrhage; Septicæmia; Inflammation of the uterus, or parts adjacent; Sub-involution, with debilitating discharges; Prolapsus.

Inversion of the Uterus.—This affection is generally acknowledged to be due to a preternatural delivery of the placenta. It rarely, I may say never, occurs except in the case of a uterus remaining large and flaccid after the expulsion of the child. In this state Dr. William Hunter used to say it was as easily inverted as the finger of a glove; but when it was contracted it was as hard to invert as a jackboot. In this relaxed condition, pulling at the funis to deliver the placenta would readily produce the difficulty. Sometimes the uterus alone effects the inversion by its own expulsive efforts immediately after the birth of the child. Even then, however, it is due to irregular and unnatural contractions, the fibres at the fundus acting strongly while those at and near the cervix are completely relaxed. Dr. Byford gives an excellent description of these cases.*

Hæmorrhage.—Dangerous hæmorrhages may have two sources, only

*Medicine and Surgery of Women.

one of which is from the placental site and due to an incomplete contraction of the uterus; perhaps some remnant of the placenta remaining attached to its walls prevents this contraction (See the interesting case reported by Dr. Heywood Smith in the Transactions of the London Obstetrical Society, 1869). The other form of hæmorrhage occurs from the *cervix uteri* on account of a rupture during the second stage of labor, when the os does not readily relax. This happens more frequently than is generally supposed.

Septicæmia.—The views held upon this fearfully fatal affection are so various and so extensive that in such introductory notes as the present, allusion can be made only to those theoretical causes which recognize the disease as originating from the presence of decomposing material in, and its absorption from, the uterus. Careful observers testify to the frequency of a profuse hæmorrhage in those cases of labor which are followed by puerperal fever, thus making a close connection between an abundant material for decomposition with a relaxed state of the uterus on the one hand, and on the other the most terrible puerperal disease. It seems natural to accept the absorption of putrid matter as the cause of this disease.

Then if the third stage of labor is so conducted as to secure a well-contracted uterus, it prevents the accumulation of material for decomposition; the absorption of putrid matter by a large and relaxed placental surface; lastly, the venous system will not be in a state to absorb rapidly, since it will have suffered no large loss of blood to empty the vessels and make them *hungry*. A full state of the blood-vessels is a good means of preventing absorption.

Inflammations. — Dr. Gooch says: "There seems rather a particular disposition to inflammation of the uterus after uterine hæmorrhage." It is then easily excited by local injuries, cold, and other causes. All authors regard decomposing material in the uterus as a prolific source of metritis, endometritis, peritonitis, and pelvic inflammations. These often result from the absorption of putrid matter to an insufficient extent for complete septicæmia.

Sub-involution of the Uterus.—The discharges which attend this condition of affairs are usually profuse and exceedingly debilitating, and become a fruitful source of aches and pains, producing a chronic state of invalidism.

Since, then, we find the dangers of the puerperal state, dependent to so large a degree upon a complete and satisfactory conclusion of the third stage of labor, we may take as our own an axiom of Dr. Barnes, slightly modified. "By the proper management of the third stage of labor, we greatly secure our patient against hæmorrhage, and many other dangers."

Let us see in what proper management consists. Before determining upon our own course, it will be well, I think, to consider the methods of practice adopted by the great men whose names have illumined our profession both in ancient and modern times.

I commence with the father of modern midwifery. Francis Mauriceau (1668) directs that as soon as the child is born, "before they do so much as tie or cut the navel-string,

they must, without losing time, free the Woman from this fleshy Mass," which he says may be done by drawing gently and from side to side on the cord, being careful not to use too much violence "lest by breaking the String near the Burthen, as sometimes happens, you be obliged to put up the whole Hand into the Womb to deliver the Woman; or that the Womb,to which the Burthen is sometimes strongly fastened, be not drawn forth with it, as hath been done to some that I knew. As also in drawing it forth with too much Violence, there may happen a very great Flooding, which would be of dangerous Consequence." He advises the woman also to assist, by blowing into her hands, by holding her breath, and by bearing down as in labor. If all of these are not sufficient, he says, "You may command an experienced Nurse-keeper to press the Belly lightly with the Flat of her Hand, directing it gently downward by way of Friction—above all, being careful not to do it too boisterously. But if all this be in vain, then must the Hand be directed into the Womb to loosen it and separate it."

In speaking of the care of a woman after her confinement, he alludes to the custom of physicians "to direct a small Plaister of Galbanum,with a little Civet in the middle to be apply'd to the Woman's Navel,which, as they imagine, is very proper to keep the Womb in its Place, because, being delighted with that Smell, it draws near to it of itself; but this Remedy is a little superstitious! wherefore I am not for it, it being sufficient to keep the Belly very warm in the situation we have directed, and to prevent the least cold."

I very much admire this old author, among other things for the very decided manner in which he gives up old customs which have nothing to recommend them except that they *are* old. When Hugh Chamberlen translated this work into English, he put in a foot-note to this direction of Mauriceau as follows: "Practice and Success commend it, nor is there Reason wanting to defend it; wherefore, notwithstanding the Author's Sense, it may be successfully continued."

John Burton of York (1756) advises to introduce the hand immediately (in a general way), or as soon as may be after the expulsion of the child, and to carefully remove the placenta. For this advice he gives seven reasons: 1, because the os and vagina are then widely dilated by the recent passage of the child, and there will be little difficulty or pain; 2, you may thus discover another infant; 3, you may thus discover the presence of a mole, polypus, or any other abnormal thing; 4, you may thus discover and remove adhesions; 5, you can remove fragments, clots, etc.; 6, you can prevent the descent and fall (inversion) of the uterus; 7, you can learn the condition of the uterus as to atony, etc., and the presence of your hand will stimulate contraction. In this procedure he says the operator should not follow the navel string, as that would conduct his hand within the membranes and would embarrass his manipulations, but he should introduce his fingers between the membranes and the womb, when he will have little difficulty. He must take care to do it gently, and not to scratch the womb with his nails. He says three objections have been made to this procedure: First, that it gives

pain; secondly, that there is a difficulty in finding out the placenta; thirdly, that there is danger of leaving some fragment. The first objection, he says, is already answered, and not one woman in five hundred is ever sensible of the matter because of the greater dilatation that preceded it. To the second objection he replies, "any botch in midwifery can easily distinguish the womb from the placenta." The last objection he reregards as of no weight, for there cannot be more danger of leaving a fragment than when the placenta is tugged out by the funis.

W. Smellie (1766) alludes to the difference of opinion about delivering the placenta, some alleging that it should be delivered slowly, or left to come away of itself, others that the hand should be immediately introduced into the uterus to separate and bring it away, and adds it should be considered how nature herself acts. In his opinion we ought to go in the middle way, never to assist but when we find it necessary; on the one hand not to torture nature when it is self-sufficient, nor delay help too long.

I may abridge my account by perhaps a general summing up of the teachings of the last part of the eighteenth century and of the first half of the present. It has been with few exceptions the plan to advise patient waiting without interference, when there was no hæmorrhage, until the uterus had itself separated and expelled the placenta into the vagina. This teaching compelled Velpeau, as he tells us,* during the space of only six months in 1823, to wait at one time ten hours; at a second twenty-four hours; at a third thirty-six hours; and at a fourth case forty-eight hours, and even then he had to introduce his hand for the removal of the placenta!

*Meigs' Velpeau, 1831.

Coming now to the practical part of our subject, let us consider for a moment the *mechanism of the expulsion of the placenta*. This has not been studied as generally or as carefully as its importance demands, and authors are far from agreed upon the method which nature herself takes to accomplish this important stage of labor.

Baudelocque and Schultze taught that the central part of the placenta is usually first separated by the uterine contractions, producing a cup-like space that becomes filled with blood, and this accumulation co-operates in pushing off the remaining attachments. Thus we should have the fœtal surface of the mass presenting at the *os uteri* and the membranes would be expelled, inverted, or turned inside out, which Ramsbotham, Rigby, and many other prominent authors, regard as *the* natural method.

A more modern view is that the uterine contractions separate the edges of the placenta first, and then roll them over on themselves, the roll being in the line of the uterine axis. By this process the shape of the mass and the direction of its axis is such as to make the delivery easy. (This is one of the economies we expect of nature, which takes the most ready manner of accomplishing her work.) There would be little hæmorrhage necessary by this method, while considerable *must* occur by the former. This view is held by Lemser,* Caseaux, J. Matthews Duncan,† Leishman,‡ and many others.

*Physiological Separation of the Placenta.
†Mechanism of the Expulsion of the Placenta.
‡System of Midwifery.

Barnes* holds a modified view: He says when the placenta is attached to the fundus of the uterus the central portion will be separated first. Burton of York, whose experience in introducing the hand into the uterus was so great, said: "I always found the strongest adhesion to be toward the edge of the placenta." This was when he had to separate adhesions.

I think examination will satisfy any one that when there has been no traction upon the cord, the placenta may come in either of these two ways, *i.e.*, inverted or not inverted. I find them in a majority of cases inverted, but in a large minority they come with the fœtal surface inside where no traction upon the cord has been indulged in.

I am convinced that an unmentioned cause of this inversion, when it does occur, is that the membranes in many cases adhere to the uterine walls even after the placenta is separated and expelled into the vagina. Who has not seen many instances of this, even detaining the placenta quite strongly in the vagina, and necessitating the advised twisting of the membranes into a rope, to prevent rupture in drawing them out? Dr. Byford says he has seen fatal cases of septicæmia resulting from membranes left in the uterus.

Why should we not habitually leave the third stage of labor to nature's own efforts? Hunter, Ruysch, Denman, and *many* European authorities encouraged this, at the same time advising not to leave the patient till it was accomplished; but it was found that hæmorrhage and puerperal fever were largely increased thereby.

The consequences of retention of the placenta are:†

1. Commonly hæmorrhage and spasmodic pain. 2. Sometimes no hæmorrhage, but expulsion after an indefinite number of hours or days. 3. Decomposition of blood, producing horribly offensive discharges; if the placenta blocks up the orifice, we may have enlargement and tympanitis and the condition called physometra. 4. Septicæmia. 5. Inflammations.

There is a liability to these even where the placenta has been expelled, if large clots are allowed to collect and decompose in the uterus; consequently the third stage of labor is not properly completed until the uterus, besides being thoroughly emptied, is also firmly contracted.

It is necessary then sometimes to interfere, and the questions at once arise: When shall assistance be rendered, and secondly, in what manner will assistance be rendered most invaluable to our patient?

Let us examine nature's method, in her happier instances. Immediately after the birth of the child, there appears to be for some little time (say ten minutes) a cessation of the uterine efforts; then they are resumed in the shape of after pains for the separation and expulsion of the placenta. . . . During this period of cessation of *active* contractions, the uterus needs to be maintained in a *tonic* contractile state, otherwise we shall have considerable hæmorrhage whenever the placenta has been partially detached during the second stage of labor. (Authors generally now bring out the distinction between active contractions and a *tonic contractile state* which firmly holds what has been already gained.) . . . Now if the hand be laid with a firm but gentle, careful grasping pressure upon the fundus

*Obstetric Operations.
†Barnes' "Obstetric Operations."

of the uterus, as it expels the child, following it down and then continuing it during this time of waiting, it will prevent relaxation and will maintain the uterine fibres in such a tonic state that little bleeding will occur. By this method we are imitating nature, in allowing a rest and yet maintaining the condition already gained. Another advantage we have is that when the uterine efforts are resumed, they are far more efficient than when the uterus has been relaxed for some ten or fifteen minutes, and has become filled with blood in a clotted mass. In ordinary labor this seems all that it is best to do. When the patient has had two or three pains, the decreased and hardened condition of the uterine globe will usually indicate the complete or partial expulsion of the placenta from the cavity of the uterus, and an oiled finger introduced into the vagina will hook it away with little difficulty. There is no objection to drawing upon the cord after the placenta can be felt in the vagina. The same sort of supporting pressure upon the uterus should be continued for at least half an hour longer, to prevent relaxation and hæmorrhage. When the uterus has remained firmly contracted for that length of time in a *healthy woman*, she may be regarded reasonably safe.

Cases requiring more decided interference may be grouped under three heads. Where the placenta is retained from—

1. Atony of the uterus.
2. Irregular contractions (rare), and
3. Morbid adhesions (very rare).

Physicians do not require a description of the symptoms of atony; it is readily recognized. It rarely occurs, except in debilitated women, or after a protracted and debilitating labor. The cause of atony I believe to be a temporary exhaustion of nerve force from excessive use; and I think we should have far less trouble from it in either the second or third stage of labor, were we to give our patient, on its earliest symptoms, three or four grains of quinia. This is like giving a tired horse a peck of oats, while the other remedies that merely stimulate the uterus are like a whip, which is sometimes very useful in enabling us to get increased work from a vigorous animal, but which fails when the animal is exhausted beyond measure. *We must treat the patient as well as the uterus.* A reason for the complete failure of uterine stimulants in so many instances has been the utter exhaustion of the woman when they were applied.

One of the methods of stimulating the uterus is to give ergot; another is to apply external stimulation—pressure, cold and electricity.

There is an objection to the use of ergot for the expulsion of the placenta, as not infrequently it produces irregular contractions of the uterus, which retain, rather than expel, the placenta. The other class of stimulants to the uterine fibres will be found sufficient, and are always preferable as far as delivery of the placenta is concerned, though for atony continuing after that event the ergot is certainly advisable, in connection with tonics. All the effects of ergot cannot be discussed in an article like the present.

As to the methods of using compression. For generations English physicians have been taught to lay a hand upon the fundus of the uterus, and press it strongly down into the pel-

vis, thus securing uterine contraction. Crede's method, as I understand it, differs but little; it is to grasp the uterus strongly, almost immediately after the second stage of labor is completed, and then to squeeze out the placenta and clots as one empties a grape of its contents. After it has contracted strongly, the decreased size will indicate when the placenta is expelled into the vagina. When, in rare instances, the uterus does not act under this stimulus, dangerous hæmorrhage may occur. Under these circumstances the physician must introduce his hand into the uterus, and with the utmost care detach the placenta, but leave the expulsion of his hand enclosing the mass to uterine contraction, which will be strongly stimulated by this contact. This manœuvre must be skillfully executed, the right hand well oiled being insinuated in the gentlest manner possible, while the left steadies and supports the fundus through the abdominal walls.

We shall not need to use *cold* or *electricity* for the delivery of the placenta, but the hæmorrhage sometimes occurring afterward may require them, and they are then very efficient.

Of these three methods of applying external stimulation, that of Crede is the readiest, and for that reason will be oftenest brought into requisition; cold stands next in convenience of application, and should be applied in such a manner as to cause shock and thus arouse the nervous energies: *e.g.*, by laying a cold hand suddenly upon the abdomen, by slapping it with a wet towel, or by pouring cold water upon it in a steady stream from some little height. Electricity often is not available when needed, but when at hand is one of the most effective means we possess of securing uterine contractions. (See reports of Drs. Earle and Danforth, in MEDICAL EXAMINER, Feb. 1st, 1874.) The faradic current should be employed.

None of these methods should be brought into frequent use; they are for emergencies only.

I cannot resist again calling your attention and consideration to several points which are to me of profound interest.

The development of the uterus by slow degrees through nine months of pregnancy does not seem very difficult of apprehension, but quite otherwise is its suddenly undertaking such great labors, like a giant developed in an hour, and then its change immediately afterward from a large sack containing gallons to a firm hard ball with a cavity holding but a few ounces.

Again, I have been accustomed to regard that condition of the post-partum uterus, which was alternately hard and soft, as a condition of danger; that the retractility, or *tonic* contractility of the organ was deficient, although the *active* contractility seemed good enough. I am inclined still to hold this view, and to think clots remaining in the uterus a twofold source of danger, although much may be said upon the other side to induce a conclusion that instead of being dangerous this is the most natural condition and one which should not be disturbed. I understand that Dr. Groesbeck of our own city holds this view. The whole subject will bear further study.

The tendency of to-day in the de livery of the placenta, seems to be to approach the methods of Mauriceau and Burton, at least so far as to deliver immediately. Several eminent gentlemen I am told recommend to intro-

duce the hand for it, if not delivered in ten minutes. Burton's French editor (ed. 1751) said the plan was dangerous, because profuse hæmorrhage might follow,—that atony was thereby produced. His conclusion, however, seems doubtful. He says nothing of the danger of producing an acute inflammation, which most modern authors think liable to follow such a procedure. I have yet to learn of any case where metritis followed a simple introduction of the hand and withdrawal of the placenta. I ask, then, the question, how great is the danger of acute inflammation of the uterus, from the careful introduction of the hand into it immediately after the expulsion of the child? Is it any greater or indeed as great as by energetically following Crede's method? Either method I regard as suitable only for emergencies, but is not Burton's as harmless as Crede's?

A BAD HABIT.

BY CHARLES HERVEY HUNT, M.D., STANWOOD, IOWA.

IT is my wish in a brief article to call attention to a habit which is very prevalent, and about which much might be said. The habit to which I refer is that of sitting with the feet elevated. I am not aware that any medical writer has ever touched upon this subject and the symptoms produced by it. Any one who will take the trouble to observe and examine for themselves, will be convinced that it is very common, more especially among business men, students, and those who lead an inactive life. Nature never intended for us to keep our feet above our heads, or she would have put them there. The first thought may be that "there is nothing in it," but if one will practice it with a view of finding out the truth for themselves, they will be convinced that it ought to be called a bad habit. Should you call upon a business man at his office and engage him in conversation, the chances are that he will have his feet upon the desk. The same thing happens while he is reading his morning paper, or doing anything else that does not require his feet to be on the floor. The habit becomes so fixed that whenever he sits down he is uneasy until he is in position. No matter where he is, the disposition to get the heels higher than the head manifests itself.

My attention was called to the habit for the first time when a student, while boring my way into the mysteries of physic. My favorite position was to sit with my feet upon the top of a desk, or a chair, which brought them upon a level with my head. After pursuing this course for about three months, I began to be troubled with headache, a feeling of lassitude, and a sense of oppression in the cardiac region, with palpitations of the heart now and then. The cardiac region seemed very sensitive and every beat of the heart could be felt. Occasionally it would cease and then start up with one great thump, as it does when one receives a sudden fright. Not knowing the cause of these symptoms,

I began to labor under the impression that I was developing some serious disease. Being new in the study of disease, my reading on that subject did not tend to diminish that idea. Soon I was obliged to throw down my books and take to outdoor exercise. For a week I pursued this course, and to my surprise the symptoms had nearly vanished. Shortly after this I went to lectures. Here the old position was resumed, the seats being admirably arranged for that purpose. In a month the trouble returned worse than before, and I was obliged to take to my bed for a couple of days. Still believing that a serious disease of the heart was rapidly developing itself, I had one of the professors of the college call, and after making an examination, he said, much to my relief, that I was "all right." Determined to find the cause of the trouble, I began to search around for it. One day the idea occurred to me that sitting with the feet up might be the cause. To prove this I tried it for a week, when the same symptoms began to appear again. After this I kept my feet on the floor, where they belonged, for a couple of weeks. Gradually the symptoms ceased, not to return again, for I have tried to keep in "position" since.

The question may be asked, "How does this position cause these symptoms?"

It will be seen that if the lower extremities are flexed upon the abdomen, the femoral artery which supplies them, and which escapes under Poupart's ligament, will be compressed, and the large amount of blood which should go to these parts is prevented from doing so. Having no other outlet here, it must be thrown into the other organs of the body, viz.: the liver, spleen, kidneys, lungs and brain. The vessels become distended, and the damming up of the blood causes the heart to act with more force. The contents of the abdomen are forced upward also, encroaching upon the space occupied by the lungs and heart. The heart is forced out of its natural position, the apex being raised and carried to the left. The pulse in the wrist becomes stronger and quicker.

I have often questioned persons whom I have found in this position, and have met with but few cases where these symptoms were not found. That this habit has a bad effect upon those who have any organic disease of the heart I have no doubt, as I have found it to be true in a number of cases. Corpulent persons are more affected by this habit than lean ones, but in all it is a habit to be avoided.

REPORTING THE EPIDEMIC DISEASES.—The Board of Health of Philadelphia, have passed the following:—

Resolved, that the Health Officer be informed, that Medical Reports of all cases of the following diseases, or of any other diseases which may at any time hereafter assume, either generally or in some particular locality, a pestilential character, would meet the requirements of the Board, in the matter of pestilential or contagious diseases, viz: Asiatic Cholera, Relapsing Fever, Yellow Fever, Typhus or Ship Fever, Cerebro-spinal Meningitis or Spotted Fever, Small-pox and Varioloid, Scarlet Fever and Diphtheria. —*Phil. Med. and Surg. Rep.*

Translations.

PROGRESS OF MEDICAL SCIENCE IN GERMANY.

BY EDMUND J. DOERING, M.D.

LITHOTRIPSY.

THE following rules for practice in lithotripsy are laid down by Dr. Ivanchich of Vienna, who has performed this operation several hundred times during a period of more than thirty years:

1. In children under the age of twelve years, lithotripsy is admissable only in very rare cases.

2. Lithotripsy is applicable to both sexes alike.

3. After the age of twelve, the older the person the more successful the operation; in old age, especially, the success of this operation is so great that lithotripsy ought always to be considered the rule, lithotomy the exception.

4. A healthy condition of the genito-urinary organs greatly favors the success of lithotripsy; but even organic diseases of these organs, of minor severity, do not absolutely contra-indicate this operation. Thus, phimosis can be relieved by circumcision; stricture of the urethra can be removed by proper preliminary measures. Hypertrophy of the prostate gland, especially if the middle lobe is enlarged, often presents a serious obstacle, but does not necessarily prevent the performance of this operation. Whenever the spontaneous expulsion of the fragments of the calculus is prevented by the hypertrophy of the prostate gland, or by atony of the bladder, we may then accomplish this by artificial extraction. Symptomatic and even severe vesical catarrh, whether the urine reacts acid or alkaline, does not contra-indicate lithotripsy. Extreme sensitiveness of the urethra is overcome by the inhalation of chloroform. However, serious organic diseases of the kidneys, ureters or bladder absolutely contra-indicate lithotripsy, but unfortunately do not add any to the chances afforded by lithotomy.

5. Lithotripsy is most successful if there are not more than one or two calculi, small in size, not larger than a walnut, and not very hard. Calculi fully as large as a hen's egg have been successfully removed by lithotripsy, but, as a rule, render this operation difficult of execution. The chemical composition of the stone is immaterial, even if it be composed of oxalate of lime. Encysted calculi, likewise such as are situated in the neck of the bladder, and cannot be pushed back, must be removed by lithotomy. Also, if the nucleus of a vesical calculus is composed of a foreign body of great size and hardness, lithotomy must be performed. — *Allg. Wiener Med. Zeitung*, No. 1, 1875.

TREATMENT OF PSORIASIS.

Dr. Zimmerhaus reports the very best results from the administration of carbolic acid in the two following cases of psoriasis:

1. M. D., 26 years of age, has been suffering for several years with psoriasis, for which he has been taking numerous remedies, especially Fowler's solution and the bichloride of mercury, but without deriving any benefit therefrom. On inspection the author found on the right and a portion of the left arm numerous irregularly formed patches covered with dry, white scales. Carbolic acid was prescribed in pill form, giving at first six grains during the day, and gradually increasing the dose to sixteen grains pro die. In fourteen days the scales had disappeared and red spots were seen in place of the patches. The dose of the carbolic acid was then diminished to four grains daily and cod-liver oil applied locally, till finally, in all five weeks after the commencement of the treatment, the patient was discharged cured. As late as three months after his dismissal no relapse had occurred.

2. M. B., a young girl thirteen years of age, under treatment for an affection of the eyes. The author's attention being called to an eruption on the skin, he discovered numerous small infiltrated patches, covered with dry scales, scattered over the back and breech of the child, presenting the usual characteristic appearances of psoriasis. The same treatment was adopted as in the former case, the dose of the carbolic acid being regulated according to the age of the child. In four weeks not a trace of the eruption could be discovered. Five months have elapsed since, but as yet the eruption has not reappeared. — *Wiener Med. Presse*, No. 42, 1874.

ADDISON'S DISEASE.

Dr. Verardini has just published a memoir on the above, embracing an analysis of all cases of Addison's disease published during the last fifteen years, the conclusions of which are summed up thus:

1. A bronze-like discoloration of the skin, without a diseased condition of the supra-renal capsules, is often observed in tuberculosis. On the other hand the supra-renal capsules are frequently found tuberculous, and having undergone caseous degeneration, without the peculiar bronzing of the skin appearing during life.

2. We find in various diseases anæmia and bronzing of the skin associated without being compelled to consider this a separate type of disease.

3. In connection with the above, loss of muscular and nervous power are often found, and yet no disease of the supra-renal capsules can be demonstrated after death.

These conclusions are in conformity with the theory advanced by the author so early as 1858, in a publication in which he states that Addison's disease must be looked upon as a cachexia, arising from various causes, and not depending solely on an affection of the supra-renal capsules. — *Allg. Med. Central Zeitung*, No. 102.

Editorial Department.

MORTALITY OF CHICAGO IN 1874.

ACCORDING to the statistics kindly furnished us by the Sanitary Superintendent, the gross mortality of this city in the year 1874 was 8,025, being a fraction less than 1 in 50 of the population. Of the whole number of deaths 903 were in hospital and from accidents. The remaining 7,122 were distributed among the several wards as follows: First Ward, 34; Second, 48; Third, 253; Fourth, 151; Fifth, 250; Sixth, 751; Seventh, 783; Eighth, 627; Ninth, 532; Tenth, 190; Eleventh, 202; Twelfth, 239; Thirteenth, 223; Fourteenth, 238; Fifteenth, 1,088; Sixteenth, 513; Seventeenth, 418; Eighteenth, 405; Nineteenth, 57; Twentieth, 120. By comparing the deaths in the several wards with the population, we see most strikingly the effects of sanitary conditions on the ratio of mortality. Thus in the first, second, fourth, fifth, tenth, twelfth, thirteenth, fourteenth, nineteenth and twentieth wards the ratio of deaths to the population varied from 1 in 70¼ in the fourteenth and twentieth to 1 in 168⅛ in the first; while in the third, sixth, seventh, eighth, ninth, eleventh, fifteenth, sixteenth, seventeenth and eighteenth wards, the ratio varied from 1 in 40½ in the seventh to 1 in 69½ in the eleventh.

The first ten wards named contain the largest part of the native American population, and embraces the best improved and most completely sewered part of the city. The last ten are occupied mostly by the foreign-born and laboring classes, and embraces the Bridgeport and Stockyard region in the south-west, and the north and north-western parts of the city. The influence of temperature and season of the year on the ratio of mortality is seen in the following figures:

Number of deaths in all the wards, not including those from accidents and in public hospital, was in January, 494; February, 414; March, 453; April, 404; May, 434; June, 440; July, 1,343; August, 1,138; September, 732; October, 498; November, 385; December, 387. Only little less than half the number of deaths for the year took place during the months of July, August and September, the number in July being more than three times that of June. The great excess of mortality in the three months named was almost wholly among the children under three years of age.

Correspondence.

THE MEDICAL SCHOOLS AND HOSPITALS OF PARIS.

EDITORS MEDICAL EXAMINER: In these days, when the majority of American medical men look upon Germany as headquarters for European medical affairs, it may not be uninteresting to note that which is being accomplished in Paris. Certainly this city, with its 17,000 hospital beds, can offer a variety of cases that it would be difficult to find elsewhere, and its lack of popularity at present cannot be ascribed to want of material for study. The long distances that separate the various hospitals cause much time to be lost in visiting them, and this is one drawback. Perhaps, as some think, the tendency of the French to consider that out of France little or nothing can be found, has had its inevitable result in permitting more liberal nations to distance them. Be these things as they may, the profession in Paris is doing good work to-day, and the journals are replete with reports of interesting and carefully-studied cases.

During the last annual competitive examination for the vacant places as assistant professor in the Faculty of Paris, the opinions that were advanced by many of the candidates upon the origin of the lymphatic system, led M. Sappey, Professor of Anatomy, to interrupt his regular course of lectures in order to give his views upon the subject in question. He announced his intention to his class in this way: "Far be it from me to deny the value of the young school, but I cannot help showing you that among the statements that have been advanced some great errors have been made which I cannot permit to pass without refuting, considering this course my duty and your right. I wish in my turn to treat of this question. They have advanced German science. I wish to show you French science, and it is by facts that I will answer the assertions made. I will do it courteously, but with entire impartiality, and I hope that from this discussion will come some light."

In his lectures on this subject, he reviewed the history of researches upon the lymphatic system, and showed how the Recklinghausen or "German" investigations were carried on by means of coloring the lymphatic epithelium with silver, while to himself was due the better method of coloring the lymph itself by reactives. From this better method of investigation he was able to arrive at the following conclusions:

1st. The lymphatic system arises by a network of capillicules and of lacunes which contain some simple granulations.

2d. From this network the lymphatic capillaries part, and, at first, are only a series of lacunes.

3d. In uniting, these lymphatic capillaries form the central trunk that is found in all the papilles and villosities.

4th. This central trunk anastomoses with the neighboring central trunks, and from these anastomoses results the plexus that was injected by the method of Fohmann and Panizza.

The course and lectures of M. Sappey have been rather severely criticized by the medical journals, and the general opinion seems to be that he has failed most signally in doing what he promised. The *Progres Medicale* closes an article on this attempt of M. Sappey as follows: "Finally, two of the lectures, given before a large audience, have not yet reversed the facts announced by the young anatomists. Enthusiastic applause has greeted the Professor, whose merit and learning all know, and whose remarkable works all appreciate. But for many this applause is directed toward the force of his convictions and the ability with which he defends them, rather than to their justness."

In another article the same journal states that if M. Sappey will take the trouble to visit the College of France he will there see preparations that demonstrate the facts that he denies. This is rather a severe charge of ignorance as to what is being accomplished by research, especially when emanating from a French journal against a professor at the medical school.

During the past month, Dr. Bouchut has been making a series of experiments with eserine (calabarine) in the treatment of chorea. In his wards at the Hopital dez Enfants Malades, he gave hypodermic injections of one and a quarter millegrammes of the soluble sulphate of eserine to twelve cases of that affection, and, as far as the disease was concerned, with good results. The patients were from seven to thirteen years of age, and in all the chorea was well marked, though not severe. Every morning the dose was repeated, and in four days three of the children were completely relieved from any choreic symptom, in a week three others, and ten days after the first injection, with one exception, all were manifestly improved. The immediate effect of the drug was an intense nausea, followed by vomiting. After some hours there appeared a partial paralysis of the diaphragm, which rarely lasted longer than half an hour. The effect of the eserine upon the pupil was very curious, for in no case did there appear a contraction, but in the majority there was a dilatation of that orifice. The results from this line of treatment are very satisfactory as regards the disease, but, like those from the use of tartar emetic, are too severe upon the patient to find general acceptance.

In the same wards is a very interesting case that illustrates the remarkable tolerance of chloral in children. The patient, a girl of eleven years, was admitted some two months ago for a chorea in its most aggravated form. She was treated with the hydrate of chloral and, for six weeks, was given three grammes (46 grs.) of that remedy night and morning. Of the chorea there were hardly any signs left at the end of that time, and the girl had no derangement of organ or function, nor, indeed, of appetite. While examining this case, Dr. Bouchut stated to me that he had never seen a bad symptom follow from the use of chloral in treating children, and certainly he has had opportunities for studying the effects of that remedy.

Bouchut himself is a close investigator, and the care with which he notes every case, during his ward visits, gives a guarantee as to the correctness of his observations. Though he has been studying the diseases of children for thirty years, his ideas do

not seem to have fallen into an unchangeable routine, as is so often the case, but he is always ready and eager to try some new remedy, not contenting himself with the past. His investigations on cerebroscopie are still being carried on, and furnish some valuable results that seem too little noticed. (In some future letter I will give his latest conclusions on this subject.)

Under the title of "Employment of the Cyanides in the Treatment of Acute Articular Rheumatism," Dr. A. Luton, of Reims, publishes an interesting article in the *Bulletin General de Therapeutique*, of January 15th. His experiments have been made especially with the cyanides of zinc and of potassium, and he recommends the former more particularly from its being free from any disagreeable taste or odor. He gives the notes of some ten cases in which he made use of the cyanides, and, were his results, as given, to be had in similar cases, we might, with him, be led to regard a cyanide as "an antiarthritic nearly specific."

The remedy was given in quantities of 5 to 20 centigrammes, during the twenty-four hours, in pills or powder. The conclusions that he has arrived at are very forcibly expressed in his closing sentences: "Finally, it is *certain* that the cyanides cure acute articular rheumatism, in its fundamental form, and in its different varieties. They cure in singularly shortening the course of the disease, and in diminishing the risk of complications that properly belong to the disease. One of the essential conditions of every good anti-rheumatismal medicine is *rapidity*. Add to this that the remedy is not disagreeable to take, and that it is anodyne, and you have the three great recommendations of the school: *cito, tuto et jucunde*."

Should the cyanides but half respond to such an enthusiastic encomium, the profession has found a powerful means of combating a subtle enemy. C. C. MATTESON, M.D.

PARIS, Jan. 18th, 1875.

Society Reports.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, FEBRUARY 8TH, 1875.

THE President, Dr. John Bartlett, called the meeting to order.

Dr. C. W. Burrell read the following report of a case of

SUPPURATIVE PLEURITIS.

While visiting for the Relief and Aid Society for the purpose of diagnosing cases, claiming aid because of sickness, I was requested February 7th, 1874, to examine the subject of these notes.

Annie B——, a girl 16 years of age; she is of German parentage, and a member of a healthy, robust family. I learned from herself and mother the following history: On Dec. 13th,

1873, after being exposed by washing outside steps, she experienced a chill, which was followed by fever and very severe pain in the left side. The physician who was called, pronounced her trouble pleuro-pneumonia. On the second or third day, the characteristic expectoration of pneumonia appeared. The pain and fever subsided, but the prostration and cough continued, the expectoration gradually ceasing. The physician who first saw her was still in attendance, and supposed the pneumonia had become chronic. She was taking tonics; was emaciated and very weak; found her in bed; was coughing often, but expectorating but little.

Examination, Saturday evening, February 7th, revealed: 1st, by inspection, perceptible bulging of left side; intercostal spaces full on left side; depressed on right; left side measuring $1\frac{1}{2}$ inches more than right; no perceptible motion of left side. 2d, by percussion, flatness over entire left lung, excepting a strip about one inch along mesian line, both anteriorly and posteriorly, and in subclavicular region, where dullness was pretty well marked; no succussion could be elicited. 3d, by auscultation, there were no rales, no bronchial breathing, no bronchophony, no vocal fremitus; in fact, there was absolute quiet on the left side; increased vesicular murmur on right.

Notwithstanding the history of pneumonia, and diagnosis of the attending physician of chronic pneumonia, I reported the case to the Society as one of Suppurative Pleuritis, and advised she be sent to an hospital, the surroundings of her home and circumstances of her parents, not permitting of proper care and treatment there. Gave an opiate to allay the cough; and as I was passing the next day, called to see her.

A change had occurred. During a severe fit of coughing, expectoration, purulent and very profuse, began. An opening into the bronchial tubes had been effected. The abundant expectoration continued; she was sent to the hospital Tuesday morning, February 10th. There she was carefully examined, and the disease diagnosed as chronic pneumonia. Prognosis decidedly unfavorable. Tonics — cod-liver oil, quin. sul. and iron—were given. The expectoration continued very profuse. She gained for a time only. After remaining in hospital for fourteen weeks without further relief, she returned home, and her mother requested me to see her, which I did, June 20th, more than six months after the origin of the trouble.

The cough was almost incessant, permitting of but little rest day or night. She was very much emaciated and nearly exhausted; could scarcely walk across the floor; pulse 120; no appetite; expectorating muco-purulent matter very freely. Examination revealed the same condition of things as did my first. The left side measured $1\frac{7}{8}$ inches more at base, and $\frac{3}{4}$ inch more under arms, than the right side. Flatness on percussion. Almost absolute silence on auscultation. Now that she could be under my control, I determined to explore the pleural cavity, which I did, assisted by Dr. Kelsey, June 22d. By means of a Codman & Shurtleff aspirator, using a No. 2 needle, 78 ounces of creamy pus were removed. During the evacuation, which required an hour and a quarter, bronchial breathing, together

with a tinkling sound, were prominent. Toward the close, air passed through the needle from the chest. The lung did not expand very well. A few doses of arom. spts. ammon. were given before and during the operation, and the patient bore it well, expressing herself relieved. Ordered cod-liver oil and n. m. acid. She rested and slept well. Had no cough for forty hours. Appetite and strength improved. On June 24th, by shaking the body, she could produce a succussion sound, which was audible at some distance. The cavity rapidly refilled, the expectoration again became profuse; the cough began to deprive her of a sufficient amount of sleep. On July 1st, being assisted by Drs. Lester, Curtis and Kelsey, I repeated the operation. The pus was thinner and darker colored; 68 ounces were removed; the operation well borne, and she improved rapidly. Oil and acid continued. July 3, she rode down town, and on the fourth, she walked ten blocks.

The appetite became almost ravenous.

During the night of July 5th, she had cholera morbus very severely.

July 8th. — Nearly regained her strength. Cavity filled to inferior angle of scapula. No cough. Pulse 98. July 10th.—Doing well. Appetite and strength returned. Coughing and expectorating sero-purulent matter. Pulse 88.

The operation was repeated on July 13th, 20 ounces of thin pus being withdrawn. She improved rapidly in weight and strength. The hair, which had fallen out, again began to grow. The oil and acid were continued. On July 21, the cavity had filled to a point an inch below inferior angle of scapula. No cough. Pulse 76. Appetite good. Sleeps well all night.

In my notes under date of August 4th, I find the following: No cough. Strength increasing. Assists in work about the house. Owing to neglect of patient in coming to my office, the operation has been delayed. As she gets better, she dreads the operation. The cavity is filled to a point higher than that at which expectoration began before. This would indicate a closure of the opening into the bronchial tubes. The upper part of lung doing good service.

Sept. 25th.—So much improved that she has neglected to come to me. Have not examined her since last date.

Sept. 30th. — Feels quite well. There is retraction of left side. The lung is acting pretty well throughout its upper half. Flatness and silence over lower portion. Operated. This time failed to get any pus.

From this time on, her health was so good, that further interference was not deemed best. She has steadily improved. Has become as strong, and more fleshy than ever in her life. Has no inconvenience whatever from that side.

The peculiarities and interesting points of this case are, the different diagnoses, the mode of operating, the duration of the disease, its course, and the rapid and complete recovery.

Dr. Hyde next gave a verbal report of a case of delivery of a living child, at seven months, after artificial contraction of the vagina, for the relief of procidentia uteri. The case is not completed, but will be subsequently

reported in full. The Molesworth dilator was used in order to enlarge a cicatrical contraction of the vagina, and premature labor was induced by its presence only.

Dr. Sawyer remarked that he had made successful use of the Molesworth dilator, for the arrest of an obstinate epistaxis, and had also made use of it in two cases of stricture of the rectum. In the first, a case of syphilitic stricture, the relief was only temporary; in the second case, a perfect cure was effected. At his suggestion, Dr. Bevan had also used the dilator in a similar case, with entire success.

Returning to the question of the best means of dilating the os, Dr. Sawyer remarked, that Dr. St. Clair, in an article in the Boston *Journal*, proposes to use the hand in all cases. One strong objection to the introduction of the hand before labor for the dilatation of the os was, the severe pain caused by the operation, so that it was only justifiable when the patient was placed under the influence of an anæsthetic. The uneven hand, Dr. Sawyer considered, was under any circumstances, inferior for the purpose, to the Brows or Molesworth dilators.

In regard to Crede's method of squeezing out the placenta, of which mention was made at the previous meeting, in the discussion of Dr. Merriman's paper, Dr. Sawyer said, that in his early experience in dispensary practice, he had employed the method in twelve cases, and had as a result, prolapsus uteri in eight of the cases.

Dr. Merriman, from the committee on clinical reports, next reported verbally, two cases of

GASTRO-INTESTINAL HÆMORRHAGE IN INFANTS.

The first case, a strong, vigorous child, thirty-six hours old, was attacked suddenly, and without apparent cause, with a vomiting and purging of blood. On the arrival of the doctor, the discharges had ceased spontaneously, but the child presented an extremely pale, exsanguine look. A mixture of fl. ext. ergot and tinct. ferri. chlor. was prescribed, and the child had no further trouble.

A second, somewhat similar case, occurred in a child forty-eight hours old. Blood was vomited in small quantity, two or three times, but no purging. Both were plethoric infants, had appeared perfectly well otherwise, and had begun to nurse before the discharges took place. Some of the authorities assign the too quick tying of the cord as the cause of these hæmorrhages. This cause could not have operated in either of these cases, however.

Dr. Merriman next referred to a case of severe constitutional syphilis, under his care, in Mercy Hospital, which, after failing to improve under any variety of syphilitic treatment, rapidly regained health upon the substitution of tonics, cod-liver oil, etc., for the mercurials and alteratives which had been given. Later, as general strength improved, the iodides were again resorted to with benefit.

In conclusion, the doctor referred to a case of puerperal fever, that had just died under his care; mental despondency and worry, he believed, to have been the chief cause of the supervention of the fever. A majority of the cases of this disease, he thought, were directly traceable to some family

trouble, or cause producing mental depression.

Dr. Hyde referred to the use of oleate of mercury, externally, in the treatment of syphilis. It was free from many of the objections attached to the ordinary internal administration of mercury, and produced no general disturbance, or debilitating effect, upon the system. The iodides could be administered internally at the same time.

Discussion followed by several members as to the connection supposed to exist between puerperal fever and erysipelas; and also, as to whether a physician was justified in attending cases of labor soon after having performed a *post-mortem*, or having been engaged in dissecting.

By vote of the Society, Dr. Bartlett was requested to prepare a report on this subject for presentation to the Society.

On motion, the Society then adjourned.

MINNESOTA STATE MEDICAL SOCIETY.

THE State Medical Society of Minnesota assembled in regular session at St. Paul, February 2d, 1875, the President, Dr. N. B. Hill, of Minneapolis, in the chair, and Dr. Charles E. Smith, of St. Paul, acting as Secretary.

During the recess between the morning and afternoon sessions, the President, Dr. Hill, was seized with an apoplectic fit, which has since proved fatal.

Upon re-assembling in the afternoon it was evident that the sudden illness of the President had caused a feeling of profound regret among his associates of the profession, and to fill the unexpected vacancy caused thereby, Dr. A. B. Stuart, of Winona, Vice-President, was called to the chair and presided during the afternoon, after announcing the sad event which made the course necessary.

At the evening session the chairman of the committee on diseases of the nervous system, Dr. H. C. Hand, reported instances of successful treatment by hypodermic injection of morphine, which report was adopted and referred to the publication committee.

Dr. Hoyt, of Hudson, presented a case of ovariotomy of a remarkable character, and another of a thyroid tumor or goitre removed from the neck of a lady. The doctor's trepidation was curtly expressed in the words "That he was scared, for she bled like blazes," but finally got well.

At the second day's session, the President's address was read by Dr. C. N. Hewitt, who explained the circumstances under which he had obtained it from the esteemed gentleman who was at the moment lying in such a critical condition at the residence of Dr. J. H. Murphy.

Dr. Hewitt proceeded with the reading of the address, which had come into his possession under such painful circumstances, and which was listened to with marked attention by President Hill's professional brethren assembled on this occasion. The address covered a wide range of subjects of special value to members of

the profession, and at the conclusion of the reading it was referred to a special committee to be appointed for the consideration of the several subjects embraced therein—the committee being appointed by the chair, and consisting of Drs. Boardman, Evans, Staples, Hewitt and Milligan.

The following officers were elected for the ensuing year: President, J. H. Stewart, of St. Paul; First Vice-President, Dr. Otis Ayer, of La Sueur; Second Vice-President, Dr. A. C. Wedge, of Albert Lea; Third Vice-President, Dr. D. W. Hand, of St. Paul; Treasurer, Dr. S. B. Sheardown, of Winona; Secretary, Dr. Charles E. Smith, of St. Paul; Cor. Secretary, Dr. A.W. Stinchfield, of Eyota, Olmsted county.

Dr. Stone read a paper exhibiting the effect of certain diseases upon the eye, which had been prepared by Dr. Ole Bull, of Minneapolis. The paper was ordered published, and the thanks of the Society were returned to Dr. Bull for his valuable and interesting contribution.

The formal report of the case of ovariotomy which had been referred in the first day's proceedings, as having been under the treatment of Dr. Otis Hoyt, of Hudson, was read by the Secretary, and received the undivided attention of the profession—the case being one of remarkable character, and the surgical operation for removal comparatively new and entirely successful. The reading of the report was concluded in the midst of applause. It was ordered published, and the thanks of the Society were returned to Dr. Hoyt for his interesting contribution to the scientific literature of the Society.

A report of the removal of a tumor by Dr. A. B. Stuart, was next read by the Secretary, and referred to the publication committee.

On motion of Dr. Hand, the Society adjourned till the next annual meeting.

Gleanings from Our Exchanges.

THE THERAPEUTICS OF FUNCTIONAL HEADACHE.

By ALLAN MCLANE HAMILTON, M.D.

From the Philadelphia Medical Times, Feb. 6th, 1875.

ALL remedies for the alleviation of the several varieties of this condition may be included under the following heads:

I. INTERNAL.
- Cerebral anæmiants.
- " stimulants.
- Those diminishing reflex irritations.
- " " remote local congestion.
- Cardiac sedatives.
- Alteratives.
  - Malarial.
  - Syphilitic.
  - Gouty.
  - Rheumatic.

II. LOCAL.
- Peripheral irritants.
- " anæsthesiants.
- " revulsives.

III. GALVANISM.

The headaches dependent upon anæmia of the brain result usually from nervous exhaustion. These are the headaches of brain-workers, or may also follow unusual physical fatigue. The distressing persistency of the headache of nervous prostration is the characteristic feature. It is the most protean of all forms, as it may be a close counterfeit of neuralgia, or, on the other hand, may be dull and sub-acute. These patients are usually anæmic and much reduced.

The headaches are associated with vertigo, and oftentimes nausea. There is usually vomiting, and sometimes syncope. The mental powers are exhausted, and the patient who suffers in this way usually awakes unrefreshed by sleep, with dull, heavy pains and a sense of fatigue. There is little disposition to use the mind; the pulse is small and feeble, and there is sometimes a tendency to passive cerebral congestion. The skin is cool during the attack, and the surface may even be moist.

Many of my patients who suffer in this way are women, and the headache is the most distressing when the patients awaken. The use of a cup of tea or coffee is excellent at this time, and I have lately found that cocoa given in the form of a fluid extract is of very great benefit. Messrs. Hazard and Caswell have made for me a fluid extract which is quite concentrated. A drachm or two of this is the dose. The following prescription is a favorite of mine for these headaches:

℞ Strichniæ sulph., gr. i;
Acidi phosph. dil.,
Tr. ferri chlor., aa ʒ vi;
Aquæ camphoræ, ad ʒ iv;—M.
Sig.—A teaspoonful after eating.

The use of diffusible stimulants is in order. We may give the patient the aromatic spirits of ammonia and sherry wine several times a day with good results. Muriate of ammonia is an invaluable remedy in these headaches, particularly in hemicrania; it should be given in very large doses—from ten grains to thirty—every hour until relief is obtained.

A form of headache, spoken of as *hyperæsthetic* by Hanfield Jones, demands opposite treatment, for the administration of stimulants aggravates it greatly. These are the cases where there are redness of the face, tense carotids, injected conjunctivæ, and heat of skin, the patient is very restless, and the mental faculties are confused. These patients have cold hands and feet during the paroxysms, as a rule. There is imperfect nervous stimulation of the heart, and the cerebral vaso-motors are subject to paresis. These patients find it difficult to sleep; there is tossing at night, and the mind is possessed by a myriad of thoughts that chase each other through the brain. The first order of remedies in my table are of value here, and the bromides are the best of them. We may give this prescription and hope for good results, sometimes very immediate ones:

℞ Sodii bromidi, ʒ i;
Fld. ext. ergotæ, ʒ iss;
Aquæ camphoræ, ad ʒ iv;—M.
Sig.—A teaspoonful every three hours, or two teaspoonfuls at night.

I believe the sodic salt to be the most efficacious of all, and the most reliable. Bromide of calcium is next in order, I am convinced, after having given it an extended trial.

In these headaches, cardiac sedatives are of incalculable benefit. Tincture of aconite and veratrum viride will often produce happy results. The continued use of digitalis, combined with zinc, the latter in the form of the oxide, does much to change the character of the circulation.

For the headaches of inebriety I have used since the year 1871 the monobromate of camphor. The results of my experiments I published in the *New York Medical Journal* of August of that year. I am sorry to see that this excellent remedy has fallen into disuse, for it seems to possess hypnotic properties peculiar to itself.

Bourneville, of Paris, has recently called attention to its physiological effects, and I trust its use will be more extended, it having received favor at the hands of this distinguished gentleman. Local depletion, and in some cases general depletion, are necessary. Leeches and cupping relieve the gorged sinuses at the base of the skull. A very common class of headaches are those dependent upon reflex causes. They may be called the *inhibitory* headaches. They go hand in hand with disturbance of digestion, irregularities in the uterine functions, and with other conditions dependent upon eccentric irritations transmitted to the central nervous axis. These headaches partake of all varieties; we

may have the well-known sick headache, the headache of dysmenorrhœa, or that associated with an irritable uterus. Of course, our diagnosis will point out the cause very quickly; but oftentimes there are points of irritation we may overlook. Hæmorrhoids may often produce headache, associated with great restlessness and fatigue. Its seat is usually in the frontal region, and it comes on very suddenly.

The uterus will account for two-thirds of the headaches among women, and one of my patients suffers with a common form all have met with undoubtedly. Her uterus is retroverted: mechanical pressure is made upon the rectum to such a degree that the walls of that gut are in contact nearly all the time. A headache is the result, which is persistent and very prostrating. She suffers constantly from constipation, and before I saw her was often in such extremities from retained fæces that she would pass an ivory paper cutter up the rectum, and press the uterus forward. After working in this manner for some time, and using a syringe, she would have an unsatisfactory, ribbon-like, and greatly attenuated stool, and the headache would disappear for several days. These cases are more familiar to the gynæcologist than to the neurologist.

Just as the stomach, when irritated by undigested food, transmits to the brain in gastric epilepsy a morbid irritation, and a convulsion is the consequence, so does it send irritations that are followed by headaches.

We are to meet these conditions therapeutically by special interference and proper remedies.

There is a somewhat rare variety of headache, but an excessively painful one,—I allude to rheumatic headache. The pain is superficial; there is a diffused hyperæsthesia over the scalp, which is very sensitive to touch. The disease may be deeper, and the dura mater be the seat of rheumatic inflammation. This is the rare variety. The external hyperæsthesia is due generally to cold. I have found it amenable in a very few minutes to the faradic current applied by the wire brush. Of course, alterative medicines will be required should there be much constitutional participation.

Headaches are associated with syphilis in nearly every instance. Oftentimes there are deep organic changes, sometimes of the dura mater, or there may exist a tumor. The headache is intense, localized, and not always attended by acceleration of pulse. It is needless to say it is worse at night. Inunctions of mercurial ointment have met my anticipations in many cases. In old cases we naturally resort to specific medicine.

The suboccipital headache of malaria is often uncontrolled by quinine alone. The combination of arsenious acid is of great use, and the addition of a small quantity of belladonna increases still more its effect.

Neuralgia is dependent upon so many causes that it will be difficult to consider its therapeutical indications without going very deeply into the history and etiology of the disease. The peripheral forms, however, deserve notice in a paper devoted to the discussion of functional diseases, and, as these are very commonly met with, particularly the facial form, it might be apropos to speak of a few serviceable remedies. I know of none so good as iron, quinine, and belladonna, or arsenic in some one of its forms. This prescription is a good one, I think, for it contains three of these agents:

℞ Morph. sulph., gr. vi;
Ext. belladonnæ,
Ext. nucis vomicæ, aa gr. xii;
Ferri et quiniæ citrat., ʒ iiss.—M.
Ft. massa et divid. in pil. No. xlviii, one t. i. d.

Strychnia is of great benefit in the anæmic variety of this disorder.

Peripheral neuralgia is treated most successfully by local applications, and among these come galvanism, chloroform, irritant applications, such as blisters, etc., and the actual cautery. The application of chloroform and of bisulphide of carbon has been recommended by several English writers. One of these substances should be poured upon a piece of cotton, and

the same placed in a wide-mouthed bottle. The mouth of the bottle is to be then held against the most painful part of the face for a few minutes. A few drops of nitrite of amyl inhaled have often stopped a severe neuralgia.

The hypodermic syringe is so much used that it would be unnecessary to allude to it. I would only speak of certain solutions that have been tried with different degrees of success.

Morphine stands prominently forward as the best. Combined with atropine it is perhaps more efficacious than when injected alone. In neuralgia, chloroform injected hypodermically has been highly recommended by Roberts Bartholow. I think its greatest fault is the production of abscesses. I have used it several times, but have always had unpleasant consequences of this kind. The irritant nature of this drug forbids its application to the skin even locally. We have all seen the blistering produced by the local application. How much more intense must be its action beneath the skin!

Blistering the skin and afterwards applying morphine to the denuded surface, is effectual in stopping some forms of peripheral neuralgia.

I have lately tried, with the most satisfactory results, the local application of the ether-spray by the atomizer. Freezing of the skin just anteriorly to the ear will cut short a violent attack of facial neuralgia in a few moments.

In certain forms of facial neuralgia, particularly where there are points of irritation, the actual cautery-iron, brushed over these points, will cure the patient.

Perhaps one of our best remedies is electricity. In the form of galvanism we may affect the cervical sympathetic, diminish the cerebral hyperæmia, or by stronger currents increase it. The poles should be held over the nuchæ or lower down, and over the mastoid bone, or upon both temples. In neuralgia the positive pole may be held just back of the ear, and the negative passed over the several branches of the fifth nerve.

The faradic current often relieves many headaches, particularly if they are diffused over the scalp, and if they are aggravated by heat to the head, or by pressure.

The application of cold is one of the best local means we have to modify or stop headache, particularly if it be of the hyperæsthetic variety. Bladders filled with ice, cold douches, and other expedients enable us to successfully combat it.

The organic headaches deserve mention by themselves, so I will not venture upon such a wide field. In all cases of this kind it is a symptom, and while attempting to relieve it, we must not forget that there is usually a cause.

THORACENTESIS.

From The Doctor, January 1, 1875.

IN an able communication on pleuritic effusion generally, Dr. J. R. Wardell, of Tunbridge Wells, thus states the conditions which may be regarded as the morbid states, and the positive and negative signs demanding thoracentesis:

1. In all cases in which inspection and the physical signs give evidence of a large quantity of fluid, when there are symptoms of compression of the lung, and there is manifest cardiac displacement.

2. When there are urgent dyspnœa, an irregular pulse, and threatening of orthopnœa.

3. When the affected side is smooth and rounded, and the intercostal spaces are effaced or protrude; when measurement proves bulging; when

the dullness in the chest is complete, or demarcated and absolute; when there is abolition of tactile fremitus; when there are bronchophonic voice, tubular breathing, and absence of breath-sound; when the patient can only lie on one side, or in diagonal position; and when there is the Hippocratic sign of succussion.

4. When the exploratory needle proves the fluid to be purulent.

5. If the heart be pushed from its normal situation, and the apex be substernal or beyond the right sternal edge, or if it be thrust toward the left hypochondrium, or if it be lost; when it becomes presumptive that the organ has been driven inwards and backwards; and when on the one side the liver depends abnormally into the abdomen, and when on the other side the relaxed and down-pressed diaphragm so displaces the spleen that its free edge can be *felt*.

6. When half the thoracic cavity is filled, and a month or so shows no proof of absorption, the longer the delay the less are the chances of expansion.

7. In those exceptional cases of double pleurisy, when both cavities become half-filled with effusion, and dyspnœa shows the lung space to be dangerously encroached upon.

8. In pulmonary phthisis, when the accumulation of serous or sero-purulent secretion causes distress, and when the other lung assumes the symptoms of bronchitis or pneumonia, the operation should at once be performed.

9. In mechanical hydrothorax it may be had recourse to, though with no object to cure, but with merely a view for a time to prolong life, and to aid the action of medicinal remedies.

10. In children, whose chest walls are thin, and in whom the white tissues are more developed and confer greater resiliency to the thoracic parietes, and whenever there are certain evidences of fluid, it should without delay be evacuated.

11. In hydropneumothorax it may be generally with safety and benefit employed.

12. Pointing externally should never be waited for.

13. Under certain circumstances repeated tappings are required.

Dr. H. F. A. Goodrich, of Bath, relates a case of acute pleuritic effusion, steadily advancing until the twelfth day, on which 45 oz. of fluid were removed, when the absorption became active and recovery was attained by the fortieth day. This case he contrasts with another which was treated without operation; but although the issue of the case was satisfactory, inasmuch as the patient recovered, Dr. Goodrich thinks that the comparative disadvantages of its treatment can hardly be overlooked, viz.:

1. The uncertainty of success, which uncertainty, it is maintained, cannot in anything like equal degree, if at all, be predicated of thoracentesis practiced with due precautions, and with the improved instruments; practiced, in short, as it now is.

2. The prolongation of the period of danger here represented by the four or five days following the admission of the patient. Sudden death was then a liability, and the youth of the subject would afford no adequate protection against it.

3. The length of time under treatment, and the comparative slowness of convalescence.

Dr. D. M. Williams, of the Liverpool Consumption Hospital, is not so disposed as the previous writers to early operation, thinking that serum will re-accumulate and probably become purulent. He relates a case in which an operation was performed, and the pus evacuated was found to be fœtid, although he believed no fistulous communication existed between the lung and the pleural cavity. After the evacuation of the pus a rapid improvement took place.

Mr. William Date, of Crewkerne, tapped a patient who had all the signs of simple pleuritic effusion, and was somewhat surprised to find that pus made its exit. Although the aspirator was employed, the pus that re-accumulated became offensive. The patient was tapped several times, with

great relief on each occasion, but subsequently sank, as so many cases of empyema do. No post-mortem was permitted.

In the *Journal de Medecine et de Chirurgie* for December are reported some observations recently made by M. Peter, of Paris, in his clinique at the Hopital Saint-Antoine. M. Peter remarked that puncture with the trocar in purulent pleurisy is often followed by the formation of a purulent fistula. It was important not to be misled on this point, and every time a purulent pleurisy is punctured the patient and his friends should be forewarned. Immediately after the puncture, the wound and the wall of the thorax appeared to close easily. At the end of a certain time, however, the little wound opens again, and evacuates a certain quantity of pus; then it closes again, to open later on; and a permanent fistula is gradually formed. Unless the patient has been warned of the probability of this event happening, he will probably accuse the physician of unskillful management, whilst it is really a consequence of the nature of the disease.

A CASE OF THORACENTESIS.

By Douglas Morton, M.D.

From the American Practitioner, February, 1875.

A YOUNG mulatto woman was admitted into the City Hospital, August 2, 1874, with the following history gathered from her former physician: four months before she had been delivered, after an easy labor, of a six months' fœtus. She did well for twelve days, when she had a chill, followed by a sharp attack of pleuro-pneumonia of the left side, which after lasting for a fortnight, seemed gradually to pass away. Some days subsequently rigors, as many as two or three daily, occurred, and on examination, a large pleuritic accumulation was discovered in the left side. When admitted to hospital, she was much emaciated, and had rigors, hectic, and night-sweats; a morning temperature of 100.5°, with a rise of one degree in the evening; pulse 120. Dr. Chandler, one of the resident physicians of the hospital, detected a large accumulation of fluid in the left pleural cavity. On August 4th, I drew off by the aspirator about forty ounces of very fetid pus, and for want of something better, introduced a No. 8 female catheter to secure subsequent drainage. No improvement occurred in the symptoms —indeed, the next evening, up to which time a large quantity of pus had escaped through the catheter, I found the patient decidedly worse. At the suggestion of Dr. Chandler, injections of a weak solution of carbolic acid were now made into the cavity daily; and under these, conjoined with brandy, quinine, and nourishing food, the patient's general condition slowly improved. The amount of pus discharged continued considerable; but neither the drainage nor the means for washing out the cavity being altogether satisfactory, I attempted to cut out a section of rib. The patient bore chloroform so badly, however, I had to content myself by simply enlarging the opening with the bistoury. The incision was made between the eighth and ninth ribs, an inch and a half behind the first opening, and through it a tube a quarter of an inch in diameter was carried into the cavity, thus securing complete drainage and making injections easy. I now directed that after the daily washing of the cavity with the carbolic acid solution, there should be injected six grains of quinine suspended in water, and this allowed to remain. I did this with the view of testing the supposed antipyo-

genic property of quinine,* and to avail myself of its known power over putrefaction of nitrogenous matter by, it is believed, destroying certain organisms which seem to bear some relation to the process.

From this time the patient made rapid improvement, and soon a perfect recovery. November 25th, she told me that within three months after the last operation, she weighed one hundred and thirty pounds, which was, I think, nearly double her weight just at that time. I was unable to make as thorough physical examination of her chest as I wished, but thought the lung had nearly, if not quite, expanded to its normal volume. The drainage-tube had been removed about a month, the discharge of pus having ceased some time before.

The history of this case throughout is, I think, of more than ordinary interest. In the first place, while we have nothing to show for the occurrence of metritis, of uterine phlebitis, or of peritonitis during the first twelve days after the miscarriage—which indeed is an exceptionally long time to intervene before the development of disease incident to the puerperal state—with the broader views we now have of septicæmia, of "embolhæmia," and their relations with puerperal fever, we are bound, I think, to admit a rather strong probability of an embolic origin for the pulmonary and pleural lesions in the case. This probability is strengthened by the fact that the patient's surroundings highly favored the occurrence of such an event, and still more by a circumstance connected with the treatment that I have not mentioned. A small quantity of either the quinine or carbolic mixture might be thrown in without producing irritation, but when a certain limit was exceeded, most violent paroxysms of coughing were excited, during which she expectorated purulent matter. She told me too, that occasionally she could taste the injected drugs. These things, I think, clearly proved a connection between the pleural cavity and some of the bronchial tubes formed by the rupture of an abscess.

There were other features that had important bearing upon the prognosis, and should be mentioned. The right lung was healthy and fairly competent for all the oxygenation required in the reduced condition of the patient; and there was no abdominal complication, tubercular or otherwise, to interfere with nutrition.

But the point in this history of crowning interest to myself, is the rapid improvement that followed immediately upon the topical use of quinine, and this notwithstanding the last tube inserted slipped out a day or two after it was put in, leaving the first to do the whole work; a fact I attach not a little importance to, as it seems to be the present opinion of surgeons that either two openings, or one made very large by removal of a section of rib, are almost essential to a good result. This circumstance not only indicates the value of the quinine treatment, but shows that a case of empyema very unfavorable as to prognosis may get well without having to endure the painful operation (for these are unsafe cases for chloroform) of rib-trephining.

* This is one of a series of experiments which I reported in the *Practitioner* for November, 1874.

CROTON CHLORAL.—This agent is the aldehyde of crotonic acid, whilst ordinary chloral is the aldehyde of acetic acid. Croton chloral rapidly produces sleep like the other chloral; but, according to Liebreich, it never slackens the pulse or respiration. It never irritates the stomach, and is looked upon as the best remedy for facial neuralgia. The same author gives croton chloral in preference to chloral where heart disease exists, and in neuralgia of the fifth pair. When ordinary chloral does not induce sleep, it should be combined with croton chloral.—*Lancet*, Jan., 1875.

THE ACTION OF PHOSPHORUS AS A STIMULANT.

By John Brunton, M.A., M.D.

From the London Lancet, January, 1875.

NEARLY, if not all the writers upon the therapeutic action of phosphorus are agreed in this, that in certain conditions of extreme physical depression or exhaustion, the action of this drug, in full doses, is of exceeding value. Patients who to all appearance are sinking rapidly, are stimulated and tided over their difficulty. In those eruptive fevers which have a definite term, and towards the close of whose course, just before the turn, the exhaustive depression is very great, phosphorus in stimulating doses acts like a charm.

The difficulties that have heretofore been met with in the administration of this drug, as regards stability, solution, absorption, and taste, and the consequent uncertainty accruing thereto, have thrown it into desuetude; but now that convenient and certain formulæ exist, a fair opportunity has arisen for testing the marvelous powers of this agent. On this account I take an early opportunity of testifying to its powers.*

Five weeks ago, Mrs. M——, aged forty-seven, was in the twelfth day of typhus fever. Her depression was very great. She lay in bed cold, nearly pulseless, semi-unconscious, and with difficulty aroused, quite unable to move in bed; in short, she appeared moribund. One-twelfth of a grain of phosphorus was administered every two hours, with marvelous effect. The revivifying power was very marked, by return of heat, pulse, consciousness, and general power. Next day she had the turn, and has recovered admirably.

J. C——, aged forty, a railway goods guard, from Peterborough, came to me on the 12th August, suffering from diarrhœa, which at that time and season was very prevalent. In a day or two he had the appearance of having something more than mere diarrhœa. He became too ill to get out, and took to his bed. On examination, I found the characteristic rose-colored spots of typhoid fever, and he had all the other symptoms present. His fever continued gradually to increase till the 29th August, when he said to me, "I am going to die"; and he looked like it. His conjunctivæ were injected, his breath cold, his skin cold and clammy; pulse 48, very weak and compressible; voice whispering; temperature 96.4°. He was in a condition of extreme depression. I at once administered phosphorus, in doses of one-twelfth of a grain, every two hours, and I was surprised to find on my next visit, eighteen hours after, when he had taken three-quarters of a grain of the drug, that he had quite revived. His skin was comfortably warm, eyes not so suffused, voice more natural; pulse 72; temperature 99°. I immediately stopped the phosphorus and gave nitric acid. Since that he has gone on prosperously, and is now convalescent.

Of course many more cases are needed to form a good induction, but I record these two for the purpose of inducing others to try the remedy. Heroic doses need careful watching, and I am sure the formula appended is most stable and active, and it is not unpalatable. I do not think that I should care to go beyond one, or at most two grains of the drug, divided over two days. The second case is a good illustration that the drug is to be suspended when the desired effect is produced.

FORMULA.

Etherial tinct. phosp. (gr. ⅛ to ℥ i.).	℥ iii.
Spt. vin. rect.,	℥ ss.
Glycerin. anhydr.,	ad ℥ iss.

One teaspoonful as a dose.

* For full information on the subject, the reader will do well to refer to the recently published work, "Free Phosphorus in Medicine," by J. Ashburton Thompson, pp. 32, 33 and 165.

FUNCTIONS OF THE SPLEEN.—M.M. Picard and Malassey communicated to the *Soc de Biologie* at its session Nov. 7 (reported in *Gaz. Med. de Paris*) the results of some experiments as to the function of the spleen, very similar in many respects to those of Tarchanoff, to which they make no reference. Their experiments were, however, conducted with reference to the red and not the white globules of the blood apparently, and the condition of the blood in this respect was very exactly noted.

They experimented on dogs, and cut the nerves of the spleen, and observed the effect of excitation of the same on the condition of the blood, as to the number of globules and the capacity for absorbing oxygen. These particulars were also noted before the section of the nerves, and before and after the division of the sympathetic. The following is the summary they give of the results:

1. The paralysis of the nerves of the spleen is followed by an augmentation of the globular richness of the blood and its richness in hæmoglobine.

2. During the excitation, on the other hand, a diminution of the same is produced.

3. We observe the inverse phenomena in other regions which we have studied in regard to these points.

The investigation is to be carried on by still further series of experiments.

BROWBEATING HYSTERIA.—A correspondent of the *Boston Medical and Surgical Journal* gives the following account of the treatment of a typical case of hysteria by Dr. Weir Mitchell: Patient was a young lady who came to the doctor from Rhode Island for treatment. She had been in bed for months. The medical experience of Rhode Island had been exhausted. Dr. W. A. Hammond advised a longer continuance in bed. Dr. Mitchell made three visits ere he began treatment. The peculiarities of the case were spinal weakness and an inability to straighten the lower extremities. At his fourth visit the doctor requested his patient to straighten her limbs. "But I can't." "But you *can*. Are they never straightened at night?" "Yes, doctor. No one ever asked me that question." The legs were straightened with but little difficulty. "Now, be kind enough to sit up." "But that is impossible; I have not been able to do it for two years." "You are able now. Please sit up." Patient sat up. "Bring her wrapper, hose and slippers, and put them on; put on a necktie; belt her waist. Now I wish you to stand." The patient now began to cry. "Good morning," said the doctor, taking his hat. "Where are you going, doctor?" "I am going away. I never attend patients who do not obey me." "Come back, doctor; I will obey you." "Then please stand up." She stood up. "But, doctor, it makes me so dizzy." "I expected it. Take my arm." She took his arm. He led her slowly out of the room, down stairs, and out of doors. She returned without aid and *did not go to bed again*. She was cured. This is given as a sample of the doctor's treatment of hysteria. He is never unkind, never rough, but inflexible, quick in manner, decided in speech, yet gentle and exceedingly polite.—*Detroit Review.*

RELATION OF OZONE TO DISEASE.—Dr. J. F. Baldwin (*Amer. Jour. Med. Sciences*, Oct., 1874) gives us an interesting collection of facts on this topic. These facts, he thinks, teach that *ozone influences the general health only in so far as it purifies the air by destroying*—not the living germs of disease, but—*the products of decomposition.*

HYSTERIA AND SPINAL IRRITATION TREATED BY CENTRAL GALVANISM.—Dr. Hutchinson (*Archives Electrology and Neurology*, May, 1874,) details three cases in which the happiest results followed the passage of electrical currents through the entire spinal cord.

THE PATHOLOGY OF PURPURA HÆMORRHAGICA.—With the extension of our knowledge of the intimate pathology of disease, we may hope for a corresponding increase of our power of diagnosis and of rational treatment. Any fresh discrimination of forms of disease which have been confused under one title, owing to the mere fact of having one symptom in common, must therefore be welcomed. Dr. B. W. Richardson, whose researches in this direction have been so fruitful, has made another contribution of the kind in the disease known as purpura hæmorrhagica, to which he has applied his observations on the properties of colloids. In a paper read before the Medical Society on the 9th November, he divides the disease into three classes, distinct in their etiology, diagnosis, and treatment: the *aqueous*, in which the water of the blood is in excess, and the colloids relatively decreased; the *saline*, where some saline substance holds the colloidal fibrin in undue solution; and the *vascular*, where there is a degenerative change in the capillaries, and rupture or transudation is facilitated. Dr. Richardson believes that the character of the eruption varies in these several forms.—*London Lancet.*

MEDICINE IN JAPAN.—The Island of Yesso is becoming more and more prosperous. An American physician has founded as many as five hospitals for the natives. He has established a regular clinique, and gives lectures to the students. These lectures are published, with illustrations, in a monthly periodical written in the Japanese language.—*Ibid.*

Book Reviews.

ON THE TREATMENT OF PLEURISY, with an Appendix of Cases, etc., by John W. Carson, M. D. New York: Wm. Wood & Co. 12mo, 31 pages.

The author of this little pamphlet has had unusual opportunities for experience and observation on the treatment of pleurisy. The cases given occurred mainly among the poorer classes of foreigners and emigrants who applied for treatment at the New York and Eastern Dispensaries. The internal treatment advised by the author, does not vary materially from that ordinarily pursued. Most especial advantages are claimed, however, from the external application of a combination of croton oil, ether and iodine, as a counter-irritant. Two formulas are given—a milder croton oil paint, as follows:

℞.—Olei croton tiglii,	ʒ i.
Ether sulph	ʒ ii.
Tinct. iodine,	ʒ v.

M. To be applied two or three coats at a time, with a camel's hair brush, over a small surface, once a week.

This is most useful for children, females, and sensitive males.

The stronger croton oil paint is given as follows:

℞.—Oleicroton tiglii,	ʒ ii.
Ether sulph.	ʒ iv.
Tinct. iodini,	ʒ ii.
Potass. iod.,	℈ i.
Iodine,	grs. x.

M. Paint as before.

These croton oil paints are advocated by the author as a substitute for blistering, in all cases where a counter-irritant effect is desired. They produce less debilitating effect, and are more steady and continuous in their effects.

EATING FOR STRENGTH: A Book Comprising 1st, The Science of Eating; 2d, Receipts for Wholesome Cookery; 3d, Receipts for Wholesome Drinks; 4th, Answers to Ever-Recurring Questions; by W. L. Holbrook, M.D. New York: Wood & Holbrook. 12mo, 156 pp.

The extended and comprehensive title given above, sufficiently explains the scope of this little work. It is designed especially for general and popular reading, its author being widely known as the editor of the *Herald of Health*, and a writer on popular hygiene and kindred topics. The views advanced and instructions given are, in the main, correct and judicious. This, and similar works treating of the general principles underlying the selection and preparation of healthy, nutritious food, should be more generally read and studied by housekeepers, wives and mothers.

ERYSIPELAS AND CHILD-BED FEVER, by Thos. C. Minor, M.D. Cincinnati: Robert Clarke & Co.

This treatise contains the results of the author's investigations into the connection said to exist between puerperal fever and erysipelas, including a short account of both diseases as they prevailed sporadically in the United States during the "census year, 1870," and an appendix containing the history of a puerperal fever epidemic observed in south-western Ohio, in the winter of 1872. It includes a large amount of historical and statistical material, collated from various sources, which apparently demonstrate a close connection as existing between the two diseases, erysipelas and puerperal fever, in their epidemic forms.

EXPERIMENTS ON ANIMALS AS A MEANS OF KNOWLEDGE IN PHYSIOLOGY, PATHOLOGY AND PRACTICAL MEDICINE, by J. C. Dalton, M.D. New York: F. W. Christern, 77 University Place.

This is a brief essay in defense of vivisections and experimentation upon living animals, intended to place the practice, and the calls and necessities for it, in its true and proper light before the public.

A GUIDE TO THE PRACTICAL EXAMINATION OF URINE, FOR THE USE OF PHYSICIANS AND STUDENTS, by James Tyson, M.D. Illustrated. Philadelphia: Lindsay & Blakiston. Chicago: Keen, Cooke & Co. 12mo, 180 pages. Price $1.50.

A plain, practical and concise little treatise on urinary analysis; it is sure to be favorably received by both physicians and students, The illustrations are numerous, and unusually well executed.

A SKETCH OF THE EARLY HISTORY OF PRACTICAL ANATOMY, the Introductory Address to the Course of Lectures on Anatomy at the Philadelphia School of Anatomy, by W. W. Keen, M.D. J. B. Lippincott: Philadelphia. 12mo, 40 pp.

PHYSICIANS' PRESCRIPTION BOOK, by Jonathan Pereira, M.D., F. R. S. Fourteenth Edition. Philadelphia: Lindsay & Blakiston.

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Original Communications.

WHAT ARE MEDICINES; WHAT THE DISTINCTIONS BETWEEN FOOD AND MEDICINES; THEIR CLASSIFICATION FOR THERAPEUTIC PURPOSES; ÆTIOLOGY.

A LECTURE IN THE REGULAR COURSE ON PRACTICAL MEDICINE, IN CHICAGO MEDICAL COLLEGE, BY N. S. DAVIS, M.D.

HAVING in the preceding lectures endeavored to explain, as familiarly as possible, the nature and conditions of health and disease in the living human body, I must now direct your attention to some thoughts on the nature and modus operandi of medicines. Remedial agents and influences properly embrace everything that can be made useful in alleviating or curing disease.

In this sense, an encouraging word or cheerful look is as much a remedial agent as a pill or a powder from the apothecary. It is my intention, however, to limit your attention during the present hour to those material agents ordinarily styled medicines, reserving the consideration of other influences for another occasion. Medicines, in this restricted sense, are such agents as are capable of being introduced into the living system, and exerting a modifying influence over one or more of the properties or functions of the body, without being capable of assimilation or addition, as nutritive matter, to any of the tissues. They may be introduced into the system through the digestive organs, through the lungs by inhalation, through the skin by absorption, through the subcutaneous tissue by hypodermic injections, and by injection directly into the blood-vessels. The first is the more common and practically important method. But in whatever way the medicine is given it enters the mass of the blood generally unchanged in its composition, and induces its effects by passing with the blood into contact with the various structures of the

body, and by such contact modifying either the properties or molecular changes, or both, in one or more of these structures. As a general rule, they are also sooner or later eliminated from the blood by some of the excretory organs in so nearly the same condition as when they were introduced, that they can be readily detected by the proper chemical tests. The apparent exceptions to these rules are such alkalies and alkaline earths as are capable of uniting directly with and neutralizing acids in the stomach before time for absorption.

Even in these cases, however, the resulting compound is absorbed, and after passing the round of the circulation, is eliminated. The real exceptions are those agents that act directly on the structures to which they are applied, as in the case of sinapisms, blisters, caustics, etc. The disposition on the part of many writers to call all the hydro-carbonaceous substances respiratory food, and those substances that simply retard the process of disintegration *indirect* food, has caused some confusion in regard to the distinction between food and medicine. It seems to me, however, that there are two plain and essential points of difference between these two classes of substances.

The first is, that food proper never passes through the digestive and assimilative organs without important changes in composition and form, and never re-appears in the excretions from either skin, kidneys, or lungs, in the same form as it entered the system. For instance, the principal proximate elements of our food are starch, gum, sugar or glucose, fat or oils, gluten, casein, the fibrin and albumen of flesh, and the inorganic salts with which they are united. If you note carefully the successive changes of the food into chyme, chyle, lacteal fluid, etc., you will find all these proximate elements radically changed before they reach the mass of the arterial blood. And you will seek in vain for any one of them in the eliminations from the true excretory organs of the body. This is directly opposite to what I have represented to be the behavior of medicine in passing through the system.

The second distinction is, that food taken in a healthy state of the system, always satiates the appetite for the time being, and that too in about the same quantity without regard to the length of time it may have been used. For instance, if a person eats bread three times a day for twenty years, he is just as readily satisfied at the end of the time as he was at the beginning. Natural appetite or hunger is simply the demand for material to supply the waste of tissue, and every substance capable of assimilation, when taken, will satisfy that demand; and with that satisfaction ceases, for the time being, all relish for more.

No such effect, however, will follow from the taking of materials that cannot be assimilated and added to the tissues by nutrition. Hence, daily observation shows that all those excitants, like the active principles of tea and coffee, and the anæsthetics, or retarders of tissue disintegration or waste, like alcohol, ether, chloroform, tobacco, etc., which have been classed by some as *indirect* food, have no power to satisfy except by mechanical fullness of the stomach, or by such a degree of stupor or anæsthesia as renders the individual for the time oblivious to further impressions.

And all these articles, instead of producing the same effects in the same quantities for any number of years, as is the case with real food, invariably create a steadily increasing demand for more. You see the young lady who sipped daintily a cup of drink at her breakfast, containing a tablespoonful of tea or coffee diluted with milk and water, ten or fifteen years later in life taking two cups at the same meal, each filled, not with milk and water flavored with a tablespoonful of tea, but with a strong infusion of tea or coffee.

In like manner, you see the young man at 18 years taking but one cigar and one glass of beer or wine per day; at 30 years consuming five or six cigars and as many drinks of beer, with now and then a glass of distilled spirits; and at 40 years he consumes a dozen cigars a day, and the number of drinks is limited only by the quantity required to induce intoxication. It is true that most, if not all, of these agents used habitually induce such a morbid condition of the stomach as to impair or destroy the appetite for proper food, but not for themselves. On the contrary, the latter grows stronger and stronger, more and more insatiable, until it too often becomes the ruling despot of the individual's life.

Having thus defined what is meant by medicines, as distinguished from food or aliments, I will divide the whole into two great classes, as follows:

First, Those substances that are capable, by their presence in the blood, of modifying the properties common to all the tissues, in such a way as to produce a perceptible change in one or more of the general processes taking place in the living body. These may be called general remedies, because in modifying the general processes of nutrition, disintegration, and calorification, they necessarily influence in some degree all the functions of the animal economy.

Second, Those substances which, though introduced into the mass of the blood, exhibit an affinity for, or special action on, some particular organ or group of organs, and hence may be termed local remedies.

The remedies included in the first class may be arranged in four groups, called general stimulants, or excitants; general tonics; general sedatives; and general alteratives.

The first group embraces those substances that increase or exalt the susceptibility of the tissues simply, as tea, coffee, caloric, oxygen, etc.

The second includes such agents as are capable of increasing the play of vital affinity, either alone or in connection with a moderate increase of susceptibility, thereby giving an increased tonicity to the structures of the body, and generally an increase in the evolution of caloric. To this group belong the preparations of iron, the mineral acids, guaiac, cantharides, phosphorus, many of the bitter vegetable alkaloids, etc.

The third group embraces those agents that are capable of influencing either the susceptibility, or the vital affinity, or both, in the opposite direction from either of the preceding groups. That is, they either depress the susceptibility or impair the play of vital affinity, or both at the same time. Consequently they diminish the molecular changes constituting nutrition, disintegration and secretion, and diminish both the evolution of caloric

and the capacity to receive impressions. To this group belong the hydrocyanic and carbonic acids, the alkalies, the bromides, alcohol, ether, chloroform, etc. Some of you may be surprised to see the alcoholic liquids included among the general sedatives. But all the experiments with alcohol, from the days of Dr. Prout to the present time, have shown that while present in the blood it directly diminishes the temperature of the tissues, retards the atomic changes and the amount of eliminations, and diminishes the general susceptibility. If these effects do not constitute it a general organic sedative, it would be difficult to conceive what should be ranked as such.

The fourth group embraces such agents as are capable of modifying the properties of the tissues in a manner different from that of simple increase or diminution, and hence they are called alteratives. To this group belong iodine, mercury, arsenic, and their several preparations, together with those agents that are supposed to neutralize poisons in the blood, or to prevent what are called zymotic changes in that fluid, such as the sulphites, permanganates, carbolic acid, etc.

These definitions are sufficient to give you a correct idea of what I mean by *general* remedies.

They produce their effects by acting on those elementary properties that are common to all the structures of the body. When they increase or exalt these properties, they are stimulants and tonics; when they impair or depress, they are sedatives; when they modify the properties different from either increase or diminution, they are alteratives.

But much the larger part of the remedies in the works on materia medica belong to the second class, called local remedies. Quite a number even of those I have enumerated as general remedies will be found to possess, in addition, a direct local influence on some structure or organ. Thus alcohol, by its presence in the blood, not only retards molecular changes throughout all the tissues as a general remedy, but like all true anæsthetics, it also diminishes locally the sensibility of the cerebro-spinal nervous centres. So, too, the tea and coffee, which have been ranked as general excitants, are capable of exerting a special local influence over certain portions of the nervous system, inducing wakefulness, palpitations, muscular tremors, etc.

The group of remedies usually styled narcotics or soporifics act more exclusively upon the brain and nervous centres. They directly diminish the sensibility of the nerve structures, and thereby relieve pain and favor sleep. In large doses they are capable of so completely suspending cerebral sensibility as to cause coma and death. To this group belong opium, conium, hyoscyamus, lactuca, chloral, etc. Though all these agents diminish cerebral sensibility, they do not all act alike. Thus opium and its preparations cause dilatation of the smaller vessels of the nervous centres, and consequently increased accumulation of blood; while hyoscyamus, belladonna and stramonii cause contraction of the vessels, and thereby lessen the quantity of blood in the part. The action of the former is accompanied by contraction of the pupils of the eyes, the latter by dilatation. Although the narcotics act primarily or

the nervous tissues, yet, by diminishing nerve sensibility, they secondarily diminish the influence of the nervous over the muscular structures, and thereby impair the respiratory movements, circulation, the peristaltic motion of the bowels, and to some extent the action of muscles of voluntary motion.

Another class of agents, when introduced into the system, are capable of so modifying the circulation and properties in the cutaneous tissue as to cause a marked increase in the amount of exhalation from the surface, and you call them diaphoretics or sudorifics. Another class exert a similar influence on the mucous membrane of the respiratory passages, and you call them expectorants. Another class so influence the kidneys as to increase the quantity of urine secreted in a given time, and they are called diuretics. Still another class so modify the condition of the mucous membrane of the stomach and bowels, and quicken the peristaltic motion, as to result in increased gastric and intestinal discharges, and they are called emetics and cathartics. The last four groups of remedies so alter the play of affinity in the organs on which they act as to increase secretory action.

But there are remedies acting on the several organs in the opposite direction; that is, in such a manner as to diminish secretion, and they are called astringents. Again, we have remedies of more or less value that do not directly modify either the structure or function of any part of the system, but which exert a purely chemical or mechanical influence. Thus you may give acids to neutralize an excess of alkalies, either in the stomach or the blood; or alkalies to neutralize an excess of acids. Pepsin, hydrochloric acid, and many other substances may be used as gastric solvents when the natural gastric juice is deficient.

There are also remedies of great value that do not properly belong either to the group of general organic sedatives or to the local narcotics. When properly administered they are capable of either diminishing the action of the heart and arteries, or of lessening the excitability of the cerebro-spinal and vaso-motor nervous centres. Those that appear to directly diminish the action of the heart and arteries, as the veratrum viride, aconite, digitalis, cold, and venesection, may be called vascular sedatives. Those that more prominently diminish the excitability of certain portions of the nervous apparatus, as the gelsemium, calabar bean, ergot, cimicifuga, etc., may be styled nervous sedatives.

In thus glancing rapidly over a therapeutic arrangement of remedial agents, it is no part of my purpose to enter upon the discussion of the modus operandi of medicines, but simply to give an outline of such a classification as would correspond with the views expressed in the preceding lectures concerning the nature and varieties of disease.

If an accurate knowledge of physiology, or the conditions of function and structure which constitute health, is essential as a starting-point for acquiring a knowledge of disease, so is a thorough study of the nature and modus operandi of medicines essential as a preparation for their intelligent application in the treatment of disease.

It is to be hoped, therefore, that all

of you have given due attention to this branch of medical science during the earlier part of your studies.

If not, I cannot too strongly urge upon you the importance of early supplying the deficiency.

To note down formulas or prescriptions and apply them in the treatment of particular diseases, simply because they were recommended by your teachers, without an accurate knowledge of each of their constituents and the special effect it is expected to produce, is to exhibit a blind dependence on authority degrading to the practitioner and dangerous to his patients. The conditions essential for the rational practice of medicine are: a clear conception of the morbid conditions affecting the patient, an equally reliable knowledge of the nature and action of medicines, and the discipline of mind necessary for accurately adjusting the latter to the fulfillment of the indications presented by the former.

The general indications for the employment of remedial agents have been variously classified by different writers. The most simple and convenient arrangement is to consider first, those having for their object the removal of the cause or causes; second, those arising from the essential pathology of the disease; and third, those afforded by the secondary symptoms or consequences of the primary pathological condition.

There are many morbid conditions which speedily cease by simply removing the causes that have induced them. There are others which, when fairly commenced, continue, though generally with less activity, after the causes have wholly ceased to act. Hence, a correct knowledge of the nature and modus operandi of the causes capable of giving rise to particular forms of disease, is of great importance both to the physician and the community. Such knowledge not only enables the physician to treat individual cases of disease more successfully, but it enables both individuals and communities to adopt such sanitary and hygienic measures as to greatly lessen the prevalence and fatality of many of the most important diseases to which our race is subject.

Ætiology, therefore, affords the only reliable foundation for the sanitary improvement of cities, populous towns, and even rural districts. To this department of medical science the world is indebted for all the advantages it derives from systems of sewerage, scavengering, water supply, modes of ventilation, improved construction of dwellings, etc.

And yet there is no field in which more careful and patient labor is needed, or which will yield the laborer a richer reward. For though very much has been accomplished in ascertaining the special circumstances which favor the development of many morbid causes, the laws that govern their diffusion, and their influence on the human system, yet but little progress has been made in the work of isolating and studying the nature, composition and properties of the several causes themselves. What has already been accomplished affords a broad foundation for most important sanitary improvements, both of an individual and municipal character; but what remains to be done in this department would add much to this foundation, and still more to our success in endeavoring to remove the

causes acting injuriously on our individual patients. Diseases are often produced by the joint action of several causes, some of which act with feeble intensity but continuously through considerable periods of time. Others act more abruptly and with greater intensity. The first usually produce their effects slowly, merely modifying slightly the properties of the tissues, or the functions of one or more organs, without at once developing the phenomena of active morbid action, and hence are called remote or predisposing causes. The second, acting with more intensity, and more directly developing marked symptoms of disease, are called exciting causes. The division, however, is an artificial one, as nearly all the predisposing causes become direct exciting ones by simply increasing their intensity or prolonging their duration. A more natural division of causes would be into external and internal. The first embracing all agents and influences originating exterior to the living body, and capable of making an unnatural impression upon any of its parts, and the second such as originate within the living organization. The external causes are resolvable into two classes, viz.: such as consist in changes either in composition, quality or quantity, of the natural ingesta, including under this latter term the air, water and food, and such as consist of agents not belonging to the natural ingesta, but capable of being received into the system through the same channels. I need hardly remind you that the air we breathe is composed of nitrogen, oxygen, ozone or active oxygen, carbonic acid, caloric, and electricity, and that these constituents are subject to almost constant variations. When such variations do not exceed certain limits they are consistent with a continuance of health in the animal economy; but when they are too abrupt or extreme, they are productive of morbid conditions often of the most dangerous character. The atmospheric elements most subject to such extreme changes are the ozone, caloric and electricity.

The most superficial observer knows that there is habitually a wide difference between the character of diseases prevailing during the high temperature of summer and the low temperature of winter. The influence of caloric in increasing the susceptibility and lessening the vital affinity or tonicity of living structures is as apparent as its power to lessen the affinity by which the atoms of inorganic matter are held together. Many facts point to an intimate relation between extreme changes in the ozone, caloric, electricity and aqueous vapor of the atmosphere, and the prevalence of such diseases as influenza, catarrh, rheumatism, cholera, etc., and there is much need of further careful investigation in this direction.

The second division of the external causes of disease, consisting of agents not naturally entering into the composition of air, water, or food, but capable of being mixed with one or more of these, and imbibed into the system through the same channels, arise mostly from the disintegration or decay of dead organic matter, both animal and vegetable.

Hence, from a remote period in the history of medicine, they have been styled *miasms*. Idio-miasms, when the product of the decomposition of animal matter or animal excretions, and koino-miasms, when from the de-

composition of vegetable matter. Until a comparatively recent period, these deleterious products were very generally regarded as inorganic, gaseous, or chemical compounds, although so subtle and attenuated as to be ever eluding the best directed efforts of the chemist to isolate and examine them. By a few, however, like Copeland and Holland in Europe, and J. K. Mitchell in America, they were regarded as organic living germs, either vegetable or animal—fungi or animalculæ. And since the general use of the microscope in medical investigations, the tendency to regard all the deleterious products of the decomposition of organic matter as organized microscopic germs, capable of self-propagation, and free diffusion in connection with the aqueous vapor of the atmosphere, has greatly increased throughout all ranks of the profession. Still, there is very little agreement among the various observers, and the whole subject needs much more extended and patient investigation.

In all our researches with the microscope, concerning the nature of morbid causes, great care is required lest we mistake the mere products or results of morbid action for the causes. For instance, if we examine the surface of a sore on the skin, or of an ulcer in the mucous membrane of the mouth, and find it covered with fungi or vegetable germs, it does not necessarily follow that such fungi were the cause of the diseased spots in either place. Neither does it follow as a legitimate deduction that certain violent epidemic diseases, as cholera for example, arise from organic germs merely because such have been seen in the excretions. To furnish data for any legitimate deductions from this class of observations, they must be made at the very incipient indications of disease, and repeated at the different stages of its progress, and after full recovery. Similar observations must also be made during the progress of other diseases affecting the same organs or structures. The first series of observations are necessary to determine whether the supposed germs are always present in a given disease, and whether present in all stages of its progress, or only at certain periods. The second series are necessary to determine whether they are peculiar to the one disease, or present in many and dissimilar diseases. One observer places a few specimens of cholera evacuations on the microscopic field, and observing certain organic germs, which, on keeping a certain length of time, develop into a species of fungus, and he straightway announces the discovery of the direct cause of cholera. Another places a specimen of the blood of a syphilitic patient on the microscopic field, and after patiently watching it for two or three days, a crop of living bodies make their appearance, and we have another grand pathological discovery.

But just as the literature of the profession has become well filled with the important discoveries, and the many practical applications of which they are capable, behold, some one else has also discovered that the special cholera fungus can be found as well in any serous intestinal evacuation, and that the so-called syphilitic germs are easily found in the blood of persons who never dreamed of having had that disease, either hereditary or acquired. It is thus that one set of investigators are constantly employed in correcting the errors of another

class, and our literature is kept full of contradictory statements.

Hasty generalization, or the deduction of important conclusions from imperfect and inadequate data, has ever been one of the greatest hindrances to genuine progress, in both the science and the art of medicine.

The second class of causes, those that originate in the living system, may be called mental and physical. That either deficient or excessive mental exercise, and either sudden or long-continued action of the emotions and passions, are capable of inducing morbid action in the physical structures of the body, is too well known to need illustration. That the physical processes of metamorphosis and disintegration may be so imperfect or perverted as to cause unnatural products to be returned into the blood, or that the secretory action of one or more secretory organs may be so perverted as to cause the secretion to be unnatural in quantity or quality, and thereby become a cause of irritation and derangement, is equally obvious. This simple and hasty glance at the subject of ætiology, will be sufficient to show you both the importance of the indication for removing the causes of disease, and the practical difficulties in the way of fulfilling it.

I stated that the second indication for the use of remedies in remedial practice was founded on the nature of the disease. For instance, if the nature of the disease is such as to present increased activity and excitement, it indicates the use of soothing and sedative remedies; if increased sensibility and suffering, either narcotics or anæsthetics; if impaired activity and relaxation, excitants and tonics; if perverted vital affinity, alteratives, etc. I need not tell you that a very large part of the skill and success of the practitioner will depend on the clearness of his appreciation of the nature of the morbid actions involved in any given case, and the accuracy with which he adjusts the remedial agents to meet the indications afforded thereby.

The third indication was founded on the secondary effects of the primary disease, and the complications that supervene during its progress.

The several organs and functions of the human body are so intimately connected with, and dependent on, each other, that it is almost impossible to have disease invade one without soon causing disturbance in others. And there are few individuals who do not have a greater susceptibility in some organs than in others, and hence, when attacked by general diseases, such sensitiveness often becomes so increased as to constitute active local disease. And it often happens that the secondary affections become the most dangerous to the life of the patient. This is illustrated strikingly when any one of the principal excretory organs are involved.

Thus disease of the kidneys may be of such a nature as to prevent a proper elimination of urea, which, being retained in the blood, poisons the cerebro-spinal nervous system, producing convulsions, coma and death. Or valvular disease of the heart, by keeping up for a long time irregular circulation of the blood, causes general derangement of secretion, especially scantiness of urine and general dropsy.

The practitioner, therefore, should study carefully the mutual relation and dependencies of one function on

another, that he may be prepared not only to treat the secondary derangements when they occur, but to enable him often to anticipate their occurrence by appropriate preventive measures.

All details concerning ætiology, pathology, diagnosis and therapeutic action of medicine will be given in connection with the consideration of particular diseases and groups of diseases, my present object being simply to give you such an outline as would challenge your attention, and systematize your thoughts in relation to these topics.

Clinical Reports.

CASES PRESENTED TO THE CLINICAL CLASS IN THE MEDICAL WARDS OF THE MERCY HOSPITAL, FEBRUARY 11 AND 12, 1875.

BY N. S. DAVIS, M.D., PROFESSOR OF CLINICAL MEDICINE, ETC.

CASE I.—PLEURO-PNEUMONIA.—M. B——, aged thirty-five years, was admitted into the hospital February 8th, three days since, presenting an anxious expression of countenance; rather purplish flush on his cheeks; dryness of the lips; white coat on the tongue; pulse 110 per minute, moderately firm under the finger; respirations 40 per minute, short and quick; skin dry and temperature 102° F. He had a frequent, short, rather stifled cough, with scanty expectoration of tenacious mucus slightly tinged with blood. He complained of constant pain in the lower part of the right side of his chest, rendered very sharp and severe by coughing or attempting to take a full breath; his urine was scanty, bowels quiet, but no appetite and little thirst. Percussion indicated moderate dullness on the right side, extending from two to three inches above the diaphragm, and over the same space auscultation afforded slight pleuritic friction, and sub-crepitant rale, with diminished expansion of that side by inspiration. The patient had been sick only two days before admission into the hospital. After the members of the class had sufficiently examined the patient, their attention was directed to the essential items of diagnosis and the indications for treatment.

The pain in the lower part of the right side of the chest, rendered severe and sharp by coughing; the character of the expectoration; and the physical signs elicited by percussion and auscultation, all point distinctly to the existence of pneumonia in the lower lobe of the right lung, and pleuritic inflammation in the corresponding part of the pleura.

The blood in the sputa; the sub

crepitant instead of the fine crepitant rale; and the imperfect inflation of that lung by inspiration, with decided dullness on percussion, indicated pneumonic exudation, constituting the second stage of the inflammatory process. During the three days that have elapsed since the patient came under observation, the dullness on percussion has extended higher, especially over the posterior part of that side, and the friction which was at first distinct has ceased to be audible; circumstances that indicate a moderate serous effusion from the inflamed surface of the pleura. We have as the present pathological conditions, a pleuro-pneumonia in the second stage of progress, in a patient whose blood is below the normal plasticity, and whose vital resistance to disease is impaired. The two last-mentioned conditions are shown by the comparative low temperature and dingy color of the surface; the quick and weak pulse; a frequency of respiration and sense of oppression in the chest out of proportion to the extent of the local inflammation; and the appearance of a large vesicle of pemphigus on the back of one hand. This apparent impairment of constitutional vigor may be owing in part to the effects of a severe attack of pneumonia which he suffered while in Europe a few years since, and in part to the effects of exposure to the unusually protracted and severe cold of our present winter.

Treatment.—Immediately after the patient came into the hospital a sinapism was applied to the right side long enough to induce some redness of the surface, and then the whole right half of the chest covered with emollient poultices which are still continued. He was also directed to take one teaspoonful of the following mixture every three hours:

℞—Ammo. Hydrochlo.	ʒ iii.
Ant. et. Pot. Tart.	2 grs.
Morph. Sulph.	3 grs.
Glycyrrhizæ Syrupi.	℥ iv.—Mix.

The next day (yesterday) he was suffering less pain in his side, but his breathing was more short and labored; lips and face more purple; pulse quicker and weaker; and the area of dullness on percussion over the lateral part of the right side of the chest increased. The doses of the anodyne expectorant mixture were directed to be continued only every four hours, and a powder containing two grains of sulphate of quinia, one of calomel, and one-sixth of a grain of sulphate of morphia, between. It was thought the quinine would check the further exudation by imparting more tone or contraction to the pulmonary vessels, and by exerting a general tonic influence. This treatment has been continued until to-day (Feb. 11th), accompanied by a steady improvement in the condition of the patient; and yet the present examination shows indications of much general weakness, dullness, and sub-mucous rhonchus over the affected side, and some blood in the expectoration. The abdomen is moderately distended with tympanitis, and, as there has been no intestinal evacuation during the last three days, he was directed to have castor oil, half an ounce, followed, if necessary, in three hours by an enema sufficient to move the bowels. The powders of quinine, two grains, and morphia, one-sixth of a grain, without the calomel, were continued every four hours, but the hydrochlorate of ammonia mixture was discontinued, and

the following formula substituted therefor:

℞—Liquor Ammo. Acetatis,	℥ ii.
Syrup Ipecac	℥ ss.
Tinct. Opii et Camph.	℥ iss.
Carb. Ammo.	ʒ iss.

Mix. Dose, one teaspoonful, or fluid drachm every four hours, alternating with the powders.

The patient was to have at short and regular intervals milk and meat broths for nourishment, and continuance of the emollient applications over the chest.*

CASE II. HÆMOPTYSIS FOLLOWED BY CASEOUS DEGENERATION.

Mr. C.—— is a laborer, aged about 28 years, medium size, and naturally strong and robust. He has been in the hospital about eight weeks, and has been two or three times examined by the clinical class.

The history of his case is briefly as follows: About fifteen months since, while in apparent good health, and engaged in active physical labor, he was taken suddenly with pretty active hæmorrhage from the lungs. This soon ceased, but was followed by some soreness in the infraclavicular region of the left side, and a moderate cough. He suffered, however, but little loss of flesh or strength until about five months later, when he began to suffer more pain and sense of oppression in the upper part of the chest, more severe cough, and some fever.

These symptoms he attributed to a severe cold. In a few days he began to expectorate suddenly a considerable quantity of thick yellow matter, mixed with some curdy substance, and an occasional mouthful of blood. The cough and purulent expectoration continued several weeks, accompanied by some emaciation and loss of strength, but gradually diminished until they had nearly ceased, when slight hæmorrhage was renewed. From that time he again improved until about two months since, when he was again attacked with pain and soreness in his chest, slight hæmorrhages, and a harsh, severe cough. Soon after the commencement of this attack, and while he was yet spitting up blood, he was admitted into the Mercy Hospital, and came directly under the observation of the clinical class. At that time, though a little thin in flesh, he had none of that pale, cachectic look common to patients suffering from tubercular phthisis, especially after repeated hæmorrhages. His pulse, respiration, temperature, and hue of the skin were nearly natural, and the chest retained its natural shape. Auscultation revealed simply a harsh or exaggerated respiratory murmur over the anterior part of the right side, with entire silence over the left side from the clavicle to the nipple, while over the remainder of the left and the whole of the posterior parts of the chest the respiratory murmur was natural, with now and then a coarse mucous rhonchus. Percussion yielded a clear, pulmonary resonance over all the chest except directly below the left clavicle, where it was entirely dull. The dullness, however, did not exist over half of the space from which the respiratory murmur was excluded, leaving the space from the lower margin of the second rib to the nipple, presenting the rare coincidence of clear resonance on percussion with the absence

*Feb. 17th, on visiting the ward, this patient was found convalescing. The only change in his treatment had been longer intervals between his medicines and more nourishment.

of all sounds in auscultation. Such a coincidence might result from either emphysema of a portion of the lung, or from temporary occlusion of a bronchus. After a careful comparison of the existing symptoms and physical signs with the past history of the case, it was thought that the original hæmorrhage, fifteen months since, resulted from the rupture of a vessel in the apex of the left lung, without any previous tubercular deposits; that extravasation of blood took place at the time into the tissue surrounding the point of rupture, which, during the succeeding five months, underwent first caseous and second purulent degeneration, the latter accompanied by cough, soreness, and finally the copious puruloid expectoration already described. From this circumscribed cavity, thus formed in the apex of that lung, all the subsequent hæmorrhages, and most of the expectoration, have come.

The hæmorrhage which was existing at the time of his admission had again filled this cavity with a fibrinous clot, temporarily preventing the entrance of air into the cavity or the adjacent portion of the lung, causing dullness over the former, and silence without dullness over the latter. He was directed to take a teaspoonful of two parts of fluid extract of hammamelis virginicus and one part of fluid extract of ergot every two hours until the hæmorrhage should cease, and a dose of some anodyne expectorant night and morning to lessen soreness and cough. In twenty-four hours the hæmorrhage ceased, and the ergot and witch-hazel were given at much longer intervals. In a few days the patient began to expectorate copiously a thick, yellow matter, and to complain of weakness and some sweating at night. At the same time it was found that the respiratory murmur had returned in the upper part of the left side of the chest, except directly below the clavicle, where there was some coarse rhonchus. The ergot mixture was then omitted, and a mixture of extract or syrup of malt and compound syrup of hypophosphites given instead.

For three weeks the patient continued to cough and expectorate freely, considerable quantities of purulent matter, and complained of shortness of breath and soreness at the upper part of the left side. Since then all his symptoms have steadily improved until now, February 12th, he has no yellow or purulent expectoration, only slight cough, and is gaining in flesh and strength. Yet there is dullness below the left clavicle, with a well-marked cavernous sound when the patient takes a full or forced inspiration. He may continue to improve until the injured part of the lung is entirely cicatrized, or he may have a return of hæmorrhage with a renewal of cough and expectoration, at any moment that accidental causes should determine a renewal of fullness of the pulmonary vessels. Careful regulation of diet, and exercise, with mild tonics, constitute the best treatment.

Translations.

PROGRESS OF MEDICAL SCIENCE IN GERMANY.

BY EDMUND J. DOERING, M.D.

RELAPSING FEVER.

DR. LAPTSCHINSKI, who has made a series of microscopical examinations of the blood of patients suffering with relapsing fever, reports among others, the following interesting case, embodying the very important conclusions the author has arrived at, as the result of his investigations.

The patient, a robust, well-developed young man, twenty-one years of age, was admitted into the hospital on the fifth day of the disease, with a temperature of 105.5° in the evening. On the following day, with a temperature of 105°, some blood was drawn by the author, mainly with the hope of finding the confervæ discovered by Obermeier in the blood of patients with relapsing fever, for which the author had searched in vain in all the cases examined by him thus far. But again he was disappointed; for neither on this day, nor on the next, nor at any time during the second paroxysm, could he find any confervæ.

At the very first examination, the author was astonished in finding not only an enormous increase of the white blood-corpuscles, but also a great accumulation of colorless cells, which could easily be distinguished from the former by their great size and irregular appearance. Some of these cells contained also fatty matter. On the addition of acetic acid, one or several nuclei, surrounded by granules, could be seen in their interior. These were evidently granular cells from the spleen, which have been discovered previously by Prof. Ponfick in the blood of relapsing fever patients, and have been described by him.

Although the relative proportion of the white to the red blood-corpuscles, previous to the present illness, was not known to the author, still he sees no reason to suspect any abnormal relation to have existed, the patient being a stout, hearty man, never having suffered from any serious illness.

On the eighth day of the disease, the blood-corpuscles were counted, the paroxysm of fever having abruptly terminated the night previous by a copious perspiration, with a fall of temperature from 105.5° to 96°. The proportion was 1 white to 64.3 red corpuscles. According to all appearances, the number of white corpuscles was even greater on the two previous days.

During the apyrectic interval, the number of white corpuscles gradually diminished, as was verified by repeated counting.

Thus, on the eleventh day of the disease, the proportion of white to red corpuscles was 1:98; on the thir-

teenth day, 1:119.5; on the morning of the fourteenth day (the relapse commencing in the evening), 1:138.

On the following day, the proportion rose at once to 1:41.2, and remained about stationary (1:50.8 and 1:37.5); falling again with the termination of the paroxysm.

The following table explains itself:

Days of Disease.	Blood-Corpuscles. Red.	White.	Proportion.	Temperature. A.M.	P.M.
8	3219 :	50 =	64.3 : 1	96°	96°
11	3528 :	36 =	98.0 : 1	98.5	98.6
13	3705 :	31 =	119.5 : 1	98.3	98.4
14	4972 :	36 =	138.1 : 1	98.1	103.6
15	5069 :	123 =	41.2 : 1	103.	105.
17	3862 :	76 =	50.8 : 1	104.	104.
18	4430 :	118 =	37.5 : 1	104.	96.
19	4966 :	80 =	62.0 : 1	96.8	98.2
21	4759 :	54 =	88.1 : 1	98.2	98.3
22	5012 :	37 =	135.5 : 1	98.3	98.
24	5006 :	25 =	200.2 . 1	98.2	98.3
26	5195 :	29 =	179.1 . 1	98.2	98.6
28	6613 :	38 =	174.0 : 1	96.8	98.3

The direct microscopic examination, and the repeated counting of the blood-corpuscles consequently proved that a sudden increase of the white corpuscles occurred during the paroxysm of fever, with a corresponding, but more gradual decrease during the apyrectic interval.

The author could easily demonstrate by the daily examination of the blood, that the diminution of the white corpuscles during the remission, corresponded with a decrease of the number of granular cells, but without a corresponding increase of the detritus found in the blood in very small quantities. As transitions from one form into another could also not be detected, the author is at present unable to explain how these granular cells disappear.

During the second paroxysm, these cells re-appeared in the blood in large numbers, gradually disappearing again after the decline of the fever.

At every paroxysm, the spleen was found to be greatly increased in size.

On the basis of these examinations, the author has arrived at the conclusion, that during the beginning of every paroxysm in relapsing fever, the contents of the spleen are discharged into the blood. If at the same time pathological products enter the blood, constituting perhaps the direct cause of the fever, is a question requiring further investigation.

In conclusion, the author states, that so much is certain, that the conferv\u00e6 are not constantly to be found in the blood, and thus cannot hold any relation to the pathogenesis of relapsing fever. — *Centralblatt f. d. Med. Wissensch.*, No. 3, 1875.

Modern Medical Treatment.— An editorial article in a British cotemporary closes with the following thoughtful words: Our treatment has assumed a character too decidedly stimulant, and not quite sufficiently nutritive. Stimulants ought to be regarded as auxiliaries to nutrition more than they are at present. Nutritive material, as milk, meat-juice, eggs, and various forms of starch, ought to form a greater matter in the dietary of the sick than stimulants, whether nitrogenized or alcoholic; such materials, when assimilated, give supplies of force. Stimulants may assist in their assimilation, and do so; but in themselves, stimulants only furnish limited supplies of force-bearing material. They are, however, a means by which the system may reach some of its physiological reserve fund. Such use may be advantageous or pernicious, according to circumstances; and an ill-regulated or excessive process of stimulation may give results as disastrous, as a wise and intelligent resort to stimulants may be beneficial in its consequences. —*Phil. Med. and Surg. Reporter.*

Editorial Department.

A MEDICAL COLLEGE IN ASIATIC TURKEY.

THE American missionaries in Turkey are wide-awake men, and the widest awake among them is the Rev. Tilman C. Trowbridge, formerly of Michigan.

Mr. Trowbridge is founding a college or university, called the Central Turkish College, in which a prominent feature is to be a Medical Department. This institution is to be located at Aintab, a city some sixty miles north-east of the north-east corner of the Mediterranean Sea. The following extracts from the writings of Mr. Trowbridge, Dr. West, of Sivas, and Dr. Post, Professor of Surgery at Beirut, show the opinions of the men on the ground:

In connection with the Central Turkey College at Aintab, it is proposed to establish a Medical Department for the thorough instruction of young men in all branches of Medical Science. That such a department is greatly needed, and will be eminently useful, there can be little doubt. We invite attention to the following statement, prepared by H. S.West, M.D., a missionary physician residing at Sivas, Asia Minor. Dr. West has lived in Turkey for the past fourteen years; he has had a most extensive practice, and the best possible opportunities to learn the wants of the country in this respect. He is well known in Turkey and in America as an earnest student and a successful practitioner. Since coming to Turkey, he has performed more than a thousand operations for the various diseases of the eye; up to January 1, 1872, he had had ninety-nine cases of *lithotomy*. In other branches of medical practice, he has been equally busy. Probably no man in the Turkish Empire is better qualified than Dr. West to give an opinion in regard to the importance of a Medical School in the interior of the country. He has kindly prepared the following statement of the reasons for the establishment of a Medical School in the interior of Turkey:

I. *Destitution of Educated Physicians in Asia Minor.*—With a population of more than ten millions, the country is almost entirely destitute in this respect. There are a few army physicians stationed at various military posts on account of the soldiers. These men receive an imperfect medical education at Constantinople, where there is a Military Medical School. The other medical practitioners are mostly Armenians, who have never received any professional training, except to be initiated into a routine of practice employed by their ancestors for many generations back, consisting mostly of blood-letting and purging. These men are only found in the principal cities. In the hundreds and thousands of villages there are no medical practitioners whatever. There are no surgical practitioners, except *bone-setters*—ignorant men and women who have learned from their ancestors to apply a bandage, but who have not the least

knowledge of anatomy or of any other science. There are also operators for cataract and other diseases of the eye, who travel the country; they perform the old operation of couching. These also, are entirely destitute of education, and know nothing of the eye. The midwives are rude, ignorant women.

II. *Appreciation of Educated Physicians.*—The services of the few European or American physicians, who have been sent out by missionary societies, are eagerly sought, especially in those towns where the people have been accustomed to employ native physicians; and, when the latter have had a very good support, they have shown their preference very manifestly for educated men, and willingness to pay them for their services according to their ability; and whenever medical men have been established, such appreciation has increased from year to year.

III. *Capability of the Natives of Becoming Successful Physicians.*—This has been shown by the fact that some of the leading and most skillful physicians of Constantinople are Armenians, who have been educated in Europe or America; also some American physicians of Asia Minor have trained Armenian students, who have become successful practitioners. The candidates for medical studies would be mostly from among the Armenians. These people, in natural abilities and capabitity of education, are very little, if any, behind those of the civilized countries of the world. There would also be some candidates from among the Greeks, and occasionally from among the Turks.

IV. *Prospect of Applicants to Enter a Medical College.*—This is shown by the fact that three medical missionaries who have received students have had many more applications than they could attend to, and the students have paid well, according to their abilities. All classes have expressed a desire for the opening of such a college in the interior.

V. *The Influence a Medical College would have to Commend the Other Departments of College Education.*—The people see and appreciate at once the practical value of a medical education, and thus learn that of other departments of knowledge. The candidates of the Medical Department would be expected also to be graduates from the Academical, and many would go through the latter for the sake of the former. The connection of the hospital would be of great benefit to the community directly, and as a means of medical education.

VI. *The Aid of the Medical School in Carrying Forward the Missionary Work.*—The advantage medical missionaries possess over clergymen in gaining access to the people is well known. The hold they obtain on the community by their professional services enables them to reach the hearts of many inaccessible to others. Earnest Christians, native physicians, who have been educated by the missionary physicians, have been among the most influential auxiliaries of the missionaries in prosecuting their work.

VII. *The Need of a Medical College for the Turkish-speaking Population of Asia Minor* at the present time is apparent from what has been said. It should be added that there is no prospect of institutions for medical education from governmental or other sources for a long time to come. They should now be opened under Christian

auspices. One has already been inaugurated in Beirut, and is doing a good work; but that is for Syria and the Arabic-speaking population. Men are rarely to be found in Asia Minor who can go to Europe or America for medical education. Those who have gone are generally to be found in Constantinople, where there are greater attractions for worldly men. No missionary physicians, with one or two exceptions, are doing anything toward training students, and those who have been trained have been of necessity those who have had but little preliminary education, and will not be able to communicate their knowledge to others. The college will furnish a permanent supply. Taking its candidates from the academical departments, where English as well as other needful studies are taught, it will train men not only to be physicians, but future teachers of medicine, and thus be a permanent institution for good through future generations. At present there are no professional works in the Armenian and Turkish languages. The students of this college will have access to English books and periodicals, and medical literature will be established also in the languages of the land.

We appeal to the members of the medical profession in England and America for aid in organizing this important branch of the college in Central Turkey. The interests of science and civilization will doubtless be greatly promoted by the establishment of this medical school.

RUSH MEDICAL COLLEGE.

THE thirty-second annual commencement of Rush Medical College was held at Central Hall, corner of Wabash avenue and Twenty-Second street. There was a very large attendance of the friends of the graduating class of 1875.

The exercises opened with prayer, after which Prof. J. W. Freer made a brief speech to the graduates, in which he gave them some fatherly advice, and hoped that their worldly career would be as prosperous as their collegiate experience had been pleasant.

The valedictory, which abounded with the pathetic eloquence characteristic of such efforts, was gracefully delivered by Dr. Henry Fritcher.

Prof. Henry M. Lyman then delivered an address, the subject of which was Count Rumford (once Benjamin Thompson), a Massachusetts man who was a Tory in principle, and who went to Europe, where he became a soldier, and subsequently a chemist. In Germany, his great merit won him a Countship—his title being taken from the American town in which he had spent his early days. To Thompson might be ascribed most of the modern improvements in kitchen ranges, furnaces, stoves, and many other things which are concomitants of a high state of civilization. He combined in himself three great essentials to success: energy, culture, and opportunity. He never missed a chance in life, and so made his mark.

The graduating class could only hope for professional success by hard work and the steady development of the talents that were in them.

Diplomas of medicine and surgery were then handed to the seventy-three graduates.

Dr. Ernest Sedgwick, on behalf of the graduating class, presented Prof. Joseph P. Ross with an elegant gold-headed cane, and an autograph album containing the signatures of all the class—a very beautiful present.

The Professor replied in fitting terms, and, after benediction, the proceedings terminated.

Correspondence.

GENERAL HOSPITAL OF VIENNA.

EDITORS MEDICAL EXAMINER: The Vienna General Hospital has as usual been filled to its utmost capacity during the winter, and as it contains about four thousand beds, we have had no want of interesting material. The out-door department, the ambulatory service, also furnishes an almost infinite variety and number of patients, particularly in the Eye, Ear and Skin departments; and perhaps I might also add, the Laryngeal department, which, since the time of Turck, is a most important branch in the hospital, and in which several hundred are daily treated. There is scarcely a doubt but that in hospital experience Vienna surpasses the world. The method of instruction is in perfect accord with that which you have so long insisted upon, viz.: bedside observation and examination. Notwithstanding there are a thousand students, there are so many lecture-rooms, and they are arranged in such a manner that each student has abundant opportunity for special examination. Such is particularly the case in the Laryngeal and Ophthalmological wards, where each student has his own table and light, and makes his examinations and applications under the immediate direction of the Professor or one of his assistants. Each lecture continues from one to two hours, half of the time being spent in examinations, the other half in explanations by the Professor. Hebra, whose name is almost a household word the world over, is as active and interesting as ever. He is punctually at his post every morning at eight o'clock, and has been absent from his clinic but once or twice the entire winter. The last volume of his work on skin diseases is recently published, but owing to its high price, twenty-five dollars (50 fl.), it will not have a large circulation, as the general practitioner and student will prefer some less voluminous work.

The method adopted by Gruber for aural instruction is most excellent. Aside from several large wards, he has a great many out-door patients who come regularly to be inspected and treated by the class, of course under his direct supervision. Each patient is numbered, and a corresponding

number with the characteristic appearance of the *membrani tympani*, is placed upon a blackboard, so that each student cannot fail to fully comprehend the pathological change. In this manner twenty to thirty cases are daily examined. Students are daily called upon to make a diagnosis, and also give explanations of abnormal appearances. Prof. Gruber has recently divined a suction syringe, for the purpose of draining pus from the middle ear, which he considers of the greatest value to the aural surgeon.

He says by means of the air balloon alone it is impossible to empty the middle ear of pus, even if the membrane should contain a large perforation, which is by no means always the case, as the pus is more or less tenacious, and lies at the bottom of the chamber. Then, too, there is always danger of driving the pus into the mastoid cells, where it must excite further inflammation. By the timely use of the instrument, he thinks inflammation of the mastoid cells can often be averted. He generally uses the instrument with the head mirror, so that he can have both hands quite free, the one to use the instrument, the other to adjust the speculum. Scarcely a day passes that he does not demonstrate the value of the instrument and the skill with which he makes use of it.

Much more attention is given to the microscope here than with us. With us students are obliged to understand practical anatomy, and why not also histology? How can they comprehend histology without practical or personal work with the microscope?

Professor Schenk, formerly assistant to Brucke, now professor of Embryology, is the great favorite with American students here who are devoting any time to microscopy, as most of them are. His laboratory, which can accommodate from forty to fifty students, is open from 8 o'clock in the morning until 12 at night, not excepting even Sundays, so that one can easily select the most convenient hours for work. The Professor is untiring in his attention to the students, and is in the laboratory from 9 a. m. until late in the afternoon. Although a young man, he has already created for himself a European reputation in Embryology. Yet, with all his skill, in the earlier stages of embryonic life he is unable to determine the higher from the lower forms of animals, Man and Monkey being quite the same.

LYMAN WARE, M.D.

VIENNA, Jan. 15th, 1875.

HYPODERMIC INJECTION OF ERGOT IN POST-PARTUM HÆMORRHAGE.—Dr. P. C. Williams, of Baltimore, in a paper read before the Medico-Chirurgical Faculty of Maryland, 1874, recommends the hypodermic injection of the fluid extract of ergot in post-partum hæmorrhage. He gives in detail three cases, in which he has found its use most advantageous in stopping severe flooding. In two of the cases it was not tried until other remedies had been employed to no purpose. The effect of the hypodermic was almost instantaneous, and it was permanent. The fluid was injected in the inside of the thigh, and in no case was an abscess produced. —*Obstetrical Journal.*

Society Reports.

CHICAGO MEDICAL SOCIETY.

REGULAR MEETING, JANUARY 4TH, 1875.

DR. LEE, Chairman of the Committee on Surgery, read a paper on Anæsthetics, and exhibited an Ether Inhaler, invented by Dr. Morgan, of Dublin. The doctor referred briefly to the discovery of ether and chloroform as anæsthetic agents, and gave some results of the investigations of a committee appointed in England some years ago, to report on the relative merits of the two agents. The primary action of both is stimulating; the secondary, depressing — ether stimulates the respiratory, chloroform the circulatory functions. Ether is safer, though slower in its action. Out of 92,815 administrations of ether, there were 4 deaths. From 152,000 administrations of chloroform, there were 84 deaths; while in 5,588 inhalations of a mixture of the two, there was one death.

Dr. Andrews, of this city, had reported that chloroform was eight times more dangerous than ether, and twice as dangerous as a mixture of chloroform and ether.

In the use of ether, the stages of anæsthesia are better marked; the patient coming more gradually under its influence, giving a better opportunity to observe the symptoms of danger. The manner of administering has much to do with the safety of the agents. American surgeons advocate the use of ether more now than formerly, though many still advocate the use of chloroform, believing it to be safer and better for the patient, claiming that there is only danger in certain cases owing to idiosyncrasy and careless administration. In illustration of the peculiar effects in certain cases, a case was related in the doctor's own experience. The patient was to be operated on for Strabismus. Chloroform was inhaled, when the heart's action became so violent, he had to desist. About a year afterwards, ether was administered, and the patient came readily under its influence without any untoward symptoms. In cases of nervous shock, ether stimulates when properly used, and do not believe it can be used too soon in these cases.

Chloroform is better borne than ether by patients under five years old. Once administered chloroform to a young woman in confinement, at intervals, for five hours, with good results. Years afterwards, had occasion to use it again for purposes of extracting a needle from this same patient. Respiration became suspended, and it was with difficulty re-established.

Ether had been used for a long time in the north of Ireland, as an intoxicating agent—from two to four drachms being taken at a time, two, four, or six times daily. It acts very

much like alcohol; thinks it is eliminated by the lungs: does not cause any peculiar evils, and is less dangerous than whisky. Three gallons of ether has the intoxicating effect of ten gallons of whisky.

Here the doctor exhibited the inhaler, and explained its use and advantages. It is a tin can with an elastic diaphragm. A flexible tube connects the can with the mouthpiece, the aperture of which is surrounded by an elastic air-cushion, which prevents the patient from breathing any air, except what may be in the can with the ether.

Has used the inhaler some twenty times, and claims for it besides perfect safety, two great advantages:

1st. The ease and rapidity with which anæsthesia can be produced—the limits of time being one and a half minutes and ten minutes; average time, about four minutes.

2d. The small quantity of ether required; a few drachms generally being sufficient.

Was at Mercy Hospital when one pound of ether had been used without effect. The inhaler was applied, and one ounce of ether produced insensibility.

In the discussion of the paper, Dr. T. D. Fitch said he was much interested in the subject. He believed that death always commenced at the lungs, as the heart generally beats fifteen or twenty minutes after respiration stopped. While in the army, and for a long time after, he was a firm believer in chloroform—believed it safer and better in the long run than ether. Changed his opinion since he lost a patient some five years ago. There is less immediate danger in ether. Thought the reason why chloroform was not dangerous in parturition, was owing to the fact that pain was present, and that the patient was not frightened. One objection against ether, however, is the poisonous effect on the blood, as sometimes shown in slow recoveries after its use.

Dr. C. M. Fitch asked, if it was not probable that the fatal result in Dr. T. D. Fitch's case, was due to paralysis of the pneumogastric nerve, death not beginning at either lungs or heart? He knew patients could be restored where death was imminent from use of chloroform, by suspending them with head downwards. Mice could be restored by suspending them by the tail.

Dr. Paoli had used ether in two cases of labor, in both of which the pains were suspended; now uses chloral hydrate in forceps cases. It renders patient insensible, but does not suspend labor.

Dr. Quine considered there was a radical difference in the mode of operation of the two agents.

Dr. Ingals related a case of a death from chloroform which occurred to him. An apparently strong, healthy woman, struggled during the administration. The pulse ceased before respiration. Post-mortem showed a fatty heart.

Dr. T. D Fitch asked for the experience of members present in the use of anæsthetics in Parturition. Do they hasten or retard labor? He considers that they always diminish the pains, and that after the expulsion of the child, the uterus does not contract so well, they rendering the patient liable to hæmorrhage.

Dr. Adolphus never uses them—always gives morphia when there is need of anything which increases the

contractions of the uterus, diminishing the irritability, rendering the pains more efficient.

Dr. Graham exhibited to the Society, two kidneys taken from a subject in the dissecting room. The right one was very much enlarged. In the left, there was almost complete atrophy of the parenchymatous substance; and instead, there were several large pockets distended with purulent fluid. In one of the pockets there was a small calculus, adherent to the mucous membrane; and in the pelvis of the organ, there was a large calculus, with a process extending into the ureter, completely occluding it.

Dr. Quine had seen the patient before death at the hospital, and he was asked to give the history of the case as far as he knew it. He stated that he had seen the patient but once, and she was then moribund from puerperal fever. She had been confined in the hospital; but since her admission, there had been no symptoms of any renal disease. At the autopsy, there was found extensive peritonitis. The pericardium was found distended with fluid. Purulent fluid was also found in the pleural cavities. The immediate cause of death was apparent, and for that reason the kidneys had not been examined.

Gleanings from Our Exchanges.

DIPHTHERIA AND SCARLATINA.

By D. H. Hayden, M.D.

From the Boston Medical and Surgical Journal, February 11, 1875.

DURING an epidemic of diphtheria in the spring of the present year, Dr. G. Mayer, of Aix-la-Chapelle, treated sixty cases with the continuous use of ice and ice-water.* From most remedies recommended as specific, the author had previously seen little if any result. Of all internal remedies, chlorate of potash in large and frequently repeated doses appeared to be the most effective, prescribed as follows for a child five years old:

Potassæ chloratis,	8 parts.
Aquæ destillatæ,	225 parts.
Syrupi rubi idæi,	25 parts.

Dose, one dessert-spoonful every hour, day and night.

He recommends, however, as by far the surest remedy, in a large majority of cases decidedly life-saving, the continuous use of ice internally, day and night. Of the sixty cases thus treated, only one died—a boy five years old, the disease having extended to the larynx very soon after its commencement. Tracheotomy prolonged life four days without saving it; the operation during this epidemic, when performed, being followed by good results in only a small percentage of the cases.

In the above cases, small pieces of ice were placed in the mouth and allowed to melt, and the operation was repeated uninterruptedly day and night for the first two or three days,

* *Jahrbuch fur Kinderheilkunde*, N. F., vii Jahrgang; 4 Heft.

in the worst cases for a longer time; also as often as possible the patient was given ice-water to drink in greater or less amount. Even with infants eight or ten months old, it is easy to administer ice-water in teaspoonful doses, and the author saw, in the case of a child nine months old, where the mother repeated this operation every two minutes during the whole of the first night, on the second day, a decided diminution of the fever and restriction of the local symptoms. The drinking of ice-water has a more decided action than the swallowing of ice in cooling the pharynx. The children generally make great resistance to drinking so frequently, especially during the night —yet by sufficient perseverance on the part of the attendant, it can be carried out regularly and continuously for the first two days. The drink can be made more palatable by the addition of sugar, or of raspberry or lemon syrup; in some cases also, by adding red wine. The ice should be pure, and when such cannot be obtained, the vessel containing the water should be placed in a mixture of salt and ice, and thus lowered to the proper temperature. When there was much swelling of the glands of the neck, ice-bags were applied in the form of cravats, though the occasions requiring this were rare. It was not uncommon with the above treatment to see decided improvement in the local appearances on the second day, and in bad cases the fever did not last longer than from five to seven days; whereas, by other methods of treatment, especially with cauterizations, the course of the disease was often slow, dragging on for a long time. When improvement begins, generally after two or three days, the child may be allowed to rest at night, but ice should then be given whenever he wakes up. The great advantage of this treatment consists in its preventing the extension of the diphtheritic inflammation especially into the larynx, in the rapid spontaneous loosening of the already formed membrane, in the rapid diminution of fever, and in the prevention of blood poisoning. Cauterizations are condemned as increasing the inflammatory swelling of the mucous membrane, endangering extension into the larynx, and, by opening blood-vessels, favoring blood poisoning. The author does not claim that this treatment is original with him, but thinks that hitherto its advantages have not been sufficiently emphasized and proclaimed.

There was a still greater need of the use of heat-extracting methods of treatment during an epidemic of scarlatina, which had prevailed in Aix-la-Chapelle since the summer of 1873, and which was not yet over at the time of writing this article. The epidemic was not a malignant one—the disposition to sequelæ was small, and cases of extreme malignancy such as were common during the epidemic of 1864, when death ensued in the first stages with symptoms of coma and convulsions, and a temperature of 41° C., were very rare. Of forty-nine cases treated, only three had swelling of the face, and moderate albuminuria (catarrhal nephritis) which passed rapidly away without any further bad results. Baths of cool water were used in eight cases; of these, one died and the others recovered. Of the seven that recovered, œdema of the face made its appearance in one, a young girl five years old, which rapidly disappeared; in a girl two years old, there was an otitis externa and adenitis submaxillaris which suppurated; there remained at the time of writing, two months afterwards, an otorrhœa which was gradually diminishing. Baths were used generally when the temperature in the axilla reached 40° C., especially if at the same time there was violent delirium, or if a tendency to coma or convulsions showed itself. When the baths were once begun, the temperature was taken every three or four hours during the day, and a bath was given as often as it reached 39·5° or even 39° C. These baths were given at 27°, gradually cooled to 22° or 21° R. and, where the

temperature was very high, to 18° R. Their duration was ten minutes. From this treatment the author saw great benefit. The subjective symptoms of the patient were much alleviated, and the lowering effect upon the temperature lasted several hours. Inunction of lard was as a rule made daily, with great relief to the itching of the skin. Ice-bags were kept continuously applied the first few days, rendering good assistance. Ice and ice-water, in accordance with the method already described, and also chlorate of potash for several days, were used in all cases, in those treated with baths as well as in those less sick, as nearly all showed more or less diphtheritis faucium. Otherwise, except in a few instances, where, on account of the continuous high temperature, quinine was administered in large doses at evening, very little medicine was given. In urgent cases where quinine is indicated and the patient cannot swallow, it can be given subcutaneously; under such conditions the author recommends trying camphor injected hourly. In one instance of lung paralysis, he saw the best results follow the subcutaneous injection of benzoes. The temperature of the room when possible was kept regulated at 10°–12° R., during the first days; later, when the fever diminished, at 14°–15° R.

THE WET SHEET IN SCARLATINA.

Dr. Taylor * thinks that the above "simple, powerful, and ready-at-hand auxiliary" in the treatment of scarlatina, is not properly appreciated by the profession. An experience of forty years has served to assure him "that this plain or medicated vapor-giving envelope affords the best *external means* for eliminating scarlatinal poison and preventing destructive sequelæ." It promptly suppresses pyrexial heat and itching; produces more or less continuous sleep, with a soft, secretive skin; and enables the digestive organs to accomplish the great desideratum in scarlatina, namely, absorption of highly nutritious food. It may be repeated on the recurrence of the febrile paroxysm two, three, or four times in twenty-four hours, the patient remaining enveloped from half an hour to an hour. Mothers and nurses who have witnessed its efficacy are most earnest for its repetition. His plan of procedure is to immerse a night-gown, slit up at the front, in hot water (half a pint to a pint), pure or medicated, with a drachm or two drachms of tincture of capsicum, or in the infusion of three or four pods; or in mustard-water, the clear, supernatant fluid from a tablespoonful of mustard to a pint of water; extending the gown over the feet by means of a towel immersed in the same fluid, both to be well wrung out and suddenly applied, and the patient quickly packed in two blankets previously placed on the adjoining sofa or bed; another blanket, or two pillows, or an eider-down quilt, covering all.

The medicated packing is preferable in the incipiency, and at any other time to evoke the rash, and in cases of cerebral oppression, with pale skin, low pulse, and delirium.

The auxiliary mode of treatment here defined, is by no means intended to exclude the ordinary plan which every practitioner's experience has led him to select and to rely upon; but the author believes that if packing is judiciously incorporated with such reliable treatment, it will be the means of saving many lives that would otherwise be lost, and of diminishing the severity and duration of the sequelæ.

THE ACTION OF QUININE.—Dr. W. A. Hammond, of New York, has published in the *Psychological and Medico-Legal Journal*, which he edits, an account of some experiments which go far to overturn the notion that quinine produces anæmia of the brain, and to establish the converse—viz.: that this drug really produces cerebral congestion. This is a very important point in reference to our daily practice.

* *Lancet*, November 14, 1874.

TWO CASES OF POST-PARTUM HÆMORRHAGE TREATED BY THE INJECTION OF PERCHLORIDE OF IRON.

BY. W. P. SWAIN, F.R.C.S.

From the Obstetrical Journal of Great Britain and Ireland, Jan., 1875.

WITHOUT wishing to fan into a flame the dying embers of controversy on the subject of the injection of perchloride of iron in post-partum hæmorrhage, I desire to put on record the two following cases which have occurred in my practice during the last six months:

CASE I was that of an exceedingly fine, handsome lady, a primipara. Her pregnancy had been uninterruptedly good. Labor commenced on the evening of January 21st. The presentation was normal, the pains good, and a fine male child was born about half-past seven on the morning of the 22d. I gave a small quantity of chloroform at the last. Immediately after the delivery of the child, I found a second head presenting, and, as the pains were not very expulsive, I put on the forceps and delivered a second male child in a few moments. I then removed the placenta, which was single and of enormous size. Considerable hæmorrhage occurred at the moment the placenta was expelled, but the womb contracted firmly, and a binder was put on. Within a few minutes, however, I found the uterus largely expanded, and, on pressure, a huge clot was expelled. I immediately introduced my left hand into the uterus, making pressure externally with the right, but was unable to produce any uterine contraction. During the whole time there was a constant and excessive flow of blood from the vagina, and the patient became collapsed. I administered brandy in large quantities and ergot, and the moment ice could be obtained I placed a large lump in the cavity of the womb, and a bag of ice on the abdomen. All was, however, of no avail, and my hopes of saving the patient were at zero. In the meantime I had obtained further professional assistance, and, with the concurrence of my father and Mr. Whipple, I injected perchloride of iron into the uterus, in the manner advised by Dr. Barnes. From the moment of the injection all flow of blood ceased, although the uterus remained for some time flaccid. The lady made an excellent recovery, and, with the exception of a little lymphatic tenderness in the right thigh, complained of nothing during her convalescence. I should mention that on the second day, and on every succeeding day for some time the vagina was thoroughly well syringed out with Condy's fluid and water.

CASE II.—I was asked by Surgeon-Major Ferguson to see at the Woman's Hospital, on July 9th, a soldier's wife in her third pregnancy. She had a contracted pelvis in its antero-posterior diameter. In her first confinement she remained a hundred and eight hours in labor; in her second, eighty-seven hours. No instrumental assistance was afforded on either occasion, and the children were still-born. This time she had been in labor sixty hours, and I found the head well down on the pelvis, but tightly fixed there. I suggested the application of the forceps, and in a very short time, after the use of considerable traction, the child was born alive, but lived only for half an hour. The placenta was removed at once without difficulty, and the uterus contracted for a short time, but in a few moments tremendous hæmorrhage set in, the blood being projected from the vagina on the floor some distance from the bed. I immediately passed my left hand into the uterus, cleared out its contents, and endeavored to secure contraction, whilst cold water was poured on to the abdomen from a

height, and brandy freely administered. This, however, did not correct the bleeding, although it somewhat lessened in quantity. Feeling that another gush of hæmorrhage might be fatal, I injected the perchloride, all the materials being fortunately at hand. The uterus at once contracted, all hæmorrhage ceased, and I hear from Dr. Ferguson that the woman has made an admirable recovery.

I think I may fairly claim two lives for the perchloride treatment. In the first case, all the usual resources, excepting galvanism, were tried in vain; the lady lay dying before our eyes, and there can be no doubt that any further hæmorrhage must have turned the balance against her. In the second case, so rapid and so large was the loss of blood, that nothing short of *immediate* arrest could have saved the patient; and this the perchloride certainly effected.

DR. RICHARDSON ON THE EFFECT OF BLOOD-LETTING IN ECLAMPSIA.—On May 29, 1873, Mr. Burton, of Richmond-Terrace, West Brompton, summoned me to see a lady whose symptoms were nearly the same as in the case described above (eclampsia). In this lady the most marked peculiarity of the labor, so Mr. Burton told me, was the excessive discharge of amniotic fluid. After delivery she became comatose, insensible, and vehemently convulsed. Her face was congested, her veins tense, her pupils fixed, and her temperature high, 103° Fahr. Before my arrival the patient had been bled freely from the arm, and the more alarming symptoms had subsided; but the jugular veins were still tense, the temperature was 102° Fahr., and the unconsciousness continued with an occasional convulsion. Confirming fully the treatment that had been pursued, I recommended the abstraction of still more blood by leeches, together with continued application of a collar of ice around the neck. I learned afterwards from Mr. Burton that the amendment in the symptoms continued, and that recovery took place without any interruption. Mr. Burton was so good as to take me to see this patient a few months ago. I found her quite well, and I could gather nothing from her that could lead to the remotest suspicion of her having suffered one single harm from the remedy which, I am morally sure, saved her life.

NOTE.—The phenomena of coma and convulsion after labor, in cases such as are here described, are, I believe, phenomena of uremia. The symptoms are identical with those of uremic coma, and the cause is not far to seek. The kidney, subjected to intense pressure during the latter term of pregnancy, is suddenly relieved by the escape of the excessive amount of amniotic fluid and birth of the child. Thereupon into the half-paralyzed vessels of the kidney there is an influx of blood, a temporary but effective congestion, and a state of things analogous to that which occurs when the nervous supply of the kidney is divided. The effect of the abstraction of blood in this condition is to afford immediate relief to the congestion of the vessels, to enable the kidney to resume function, and to let the order of the economy proceed.—*Obstetrical Journal.*

COPAIBA IN DROPSY.—Dr. Falconer (*Canada Lancet*, Dec., 1874) feels confident that very few practitioners have given this drug a fair trial in ascites. Passing by cases of cirrhosis and chronic peritonitis, with their accompanying effusions, in which, after reaccumulation after tapping, he has succeeded in not only diminishing but in completely removing the fluid by the use of copaiba, he refers to a case of ovarian dropsy, which he treated successfully by the drug. Copaiba is the diuretic, par excellence, and never fails in removing the serum through the kidneys, except in chronic albuminuria. It obviates the use of elaterium or gamboge, tapping or ovariotomy, in many cases.

CHLOROFORM IN CONGESTIVE CHILLS.—Dr. R. K. Hinton writes to the *Philadelphia Medical and Surgical Reporter*, as follows:

I have been in the habit of using chloroform in the cold stage of congestive chills, and also ordinary intermittents, for several years past, and have never found anything that would bring on reaction more speedily. The following case which I transcribe from my case-book, will show its effects:

On the fifth of July, 1874, I was called in haste to see Patrick O'Connor. The messenger informed me that he was laboring under his third sinking chill. On my arrival, I found my patient pulseless at the wrist; feet and legs cold; constant nausea and vomiting; had had two attacks of syncope; in short, I supposed my patient would never react. Sinapisms were applied to the stomach and epigastric region, and the extremities rubbed with liquid ammonia. Hot baths could not be used, owing to syncope coming on immediately on attempting to raise him up. I immediately put him on six drop doses of chloroform in sweetened water, to be repeated every fifteen minutes. After taking the second dose, he was much better; pulse returning at the wrist; nausea and vomiting entirely stopped. In one hour from this time, reaction was entirely established; the fever soon passed off; and after the free use of quinine, he had no return of the chills.

Remarks.—As I before said, I have been in the habit of using this remedy for several years past. The first case was a negro boy, who was laboring under his second chill. He had obstinate vomiting; the whole array of remedies was brought to bear in this case, but to no purpose. Chloroform was substituted, and in a comparatively short time reaction was fully established.

It appears to fulfill the following indications: 1. It allays nausea and vomiting. 2. It allays the pain in the stomach. 3. It equalizes the circulation. 4. Reaction is never excessive after its use. I have used chloroform in the hot stages of intermittent, and with the happiest results. It appears to allay nervous excitement, and by so doing, quiets the heart's action. I have also used it in the treatment of pneumonia, in from five to ten drop doses every two hours. It allays the cough and all nervous excitement, and appears to cool down the fever.

THE ANTIPHLOGISTIC ACTION OF CARBOLIC ACID.—Professor Hueter, of Greifswald, in a report to the Third Congress of the German Surgical Society, read a paper on the antiphlogistic action of parenchymatous injections of carbolic acid. He has used this treatment with success in white swelling of the joints, in subacute inflammation of the lymphatic glands, in acute phlegmonous inflammations, and in traumatic erysipelas. The injection fluid consists of a two per cent. watery solution of carbolic acid. This strength may, however, be increased. Two grammes may be injected at one time.

Hueter has also employed this treatment in commencing inflammation of the bones, before suppuration has begun. He recommends the injection of one or two drachms of the mixture into the medullary cavity, the softened cortical substance presenting no material resistance to the point of the needle. This same solution he has employed for the radical cure of hydrocele, injecting about seven grammes into the tunica vaginalis. Here, as in the other cases, the carbolic acid injections show their anæsthetic action, very little pain being caused by the process and no pain following it. In applying this method of treatment to tumors he had no success in the case of lipomas and sarcomata. He succeeded in reducing the size of soft fibromata and myxomata; scirrhous nodules became smaller and painless, and epithelial ulcers were changed into healthy, granulating surfaces.—*Boston Medical and Surgical Journal.*

THE PHYSIOLOGY OF VOMITING, AND THE ACTION OF DRUGS UPON IT.—Dr. T. Lauder Brunton, the present editior of *The Practitioner*, in a highly interesting article on the above subject, submits the following conclusions:

(1.) Vomiting consists in two factors, viz., (1) the simultaneous compression of the stomach by the abdominal muscles and diaphragm; and (2) the opening of the cardiac orifice by the contraction of the longitudinal fibres of the œsophagus.

(2.) When innervation is disturbed, these two factors do not occur together, and thus retching may occur without vomiting.

(3.) The movements of vomiting are correlated by a nervous centre in the medulla oblongata, from which impulses are sent down through various motor nerves to the muscular structures engaged in the act.

(4.) This nervous centre is probably closely connected with the respiratory centre, but is not identical with it.

(5.) It is usually set in action reflexly by irritation of the pharyngeal, gastric, hepatic, enteric, renal, uterine, ovarian, and possibly also by the pulmonary and vesical nerves which come from the periphery towards it. It may also be excited by impressions sent down to it from the brain.

(6.) Vomiting may be arrested in two ways, either by removing the irritant which is exciting the vomiting centre, or by lessening the excitability itself, so that the centre no longer responds to the impressions made on it from without.

(7.) Emetics may be divided into two classes: those which act only on the stomach, and those which act on the vomiting centre also.

(8.) Tartar emetic probably acts in both ways. Tolerance of it is probably due to want of hydrochloric acid in the stomach.

(9.) Emetics may be used to evacuate the stomach and duodenum. They thus remove irritating matters, poisons generated in the stomach by putrefaction, bile, and metals or fever poisons circulating in the entero-hepatic circulation.

(10.) They may be also used to empty the bronchi and gall-bladder, or to cut short epileptic, and to prevent ague fits. — *The Practitioner*, December, 1875.—*N. Y. Med. Record.*

INFLUENCE OF NUTRITIVE CHANGES AND EXTERNAL CIRCUMSTANCES IN THE PARENT UPON THE DEVELOPMENT OF SCROFULOUS CHILDREN.—In a recent address by Dr. Evory Kenedy, before the Dublin Obstetrical Society, the proposition was put forward that scrofula is affected by the surroundings and circumstances which modify the human organism, his views being founded upon the fact that "all organizations are not merely variable, but varying." The following case was mentioned as an interesting illustration of the manner in which external circumstances may lead to the production of those modifications of the human organism, which we collectively term "scrofula," and of a return to the normal condition when the circumstances which had produced the changes had passed away. A peasant, whose family was liable to scrofulous modification, as seen markedly in his sister and her family, married a woman free from any taint of scrofula, and had two children, who presented none of the characteristics known as scrofula. After their birth, the father had an attack of rheumatic fever, which left him with an injured heart, and consequently in straitened circumstances from his crippled condition as a bread winner. During this period of nipping poverty, two other children were born, whose clumsy fingers, thick joints, tumid alæ nasi and upper lips, together with a strong tendency to glandular enlargements, mark the scrofulous diathesis. After this time, the mother had an annuity left her, which once more placed them in comparative plenty. Two more children were born, approaching the healthy type of the two eldest, and comparatively free from the characteristics of

the middle pair. When the family are gathered together, the history of the married life of the parents can be read in the physiques of their offspring.—*Br. Med. Jour.*—*N. Y. Med. Record.*

ABSENCE OF THE FŒTAL PULSE DURING EXTRACTION BY THE FEET.—Professor Dohen, of Marburg, reports* two cases where, during an extraction by the feet, the fœtal pulse ceased for a considerable length of time, and yet with no fatal result to the child. In both cases the pelvis was contracted, and the pulse was distinctly felt to cease beating as the aftercoming head descended into the pelvis. In the first case the cardiac pulsations were suspended for at least two minutes, and in the second case for more than three minutes. In the first case the baby, a girl, was reanimated in a warm bath after about a quarter of an hour's effort; but in the second case the measures to resuscitate the infant, a boy, were continued for half an hour before the frequency of the inspiratory and pulse movements became normal.

Professor Dohen considers that the arrest of the heart in these two cases was due to the compression of the brain and irritation of the pneumogastric. In cases where the arrest of the heart's beat is due to asphyxia, there is but little hope of saving the child's life; but where the action of the pulse is slackened or arrested by compression of the brain, a rapid extraction of the head will usually be sufficient to save the life of the infant.

These views are strictly in accordance with the theory of Leyden,† who has shown that the compression of the brain which slackens the heart's beats may also completely arrest them, and that this action is produced by the help of the pneumogastric.—*Boston Med. and Surg. Jour.*

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* *Obstetrical Journal of Great Britain and Ireland*, January, 1875, from *Archives de Tocologie*, October, 1874.

† *Virchow's Archiv.*, xxxvii., 4.

RHEUMATISM.—Dr. T. S. Dowse, in a paper read before the Norwich meeting of the British Medical Association, and published in full in the *Journal*, says that in the treatment of rheumatic fever the first thing to do is to eliminate the acid products of the diseased state; and the next, to relieve pain. To bring this about, he has for the last three years been in the habit of packing most of his cases in a wet blanket, and then rolling them up in dry blankets, so as to promote profuse sweating, and also increase the temperature. Finding this rough method gave good results, he at once adopted a systematic mode of procedure, which he thus describes: The bed is covered with india-rubber sheeting; over this is laid a blanket which has been wrung out of hot water. The patient is then enveloped in the blanket, and covered with six folds of dry blanketing. By this the temperature is raised, and profuse sweating results; the former, if need be, is assisted by the administration of brandy in half-ounce or ounce doses every hour, and the latter by giving freely warm milk and water. If the temperature exceed 102° F., then the stimulant is unnecessary.

Dr. Dowse continues the treatment for three days. He finds that after the third pack the pain has completely subsided, and the sour taste usually disappears.

We may remark that this method of treatment is by no means new.—*The Doctor.*

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Original Communications.

THE DIFFERENCE BETWEEN CARCINOMA AND SARCOMA.

THE following cases and illustrations were laid before the Society of Physicians and Surgeons, by Dr. E. Andrews, Professor of Surgery in Chicago Medical College, and Dr. L. Curtis, Professor of Pathology in the Woman's Medical College. As the distinction between these diseases is obscure in many minds, the authors have reproduced the essay in these pages, to give a clear idea of the differential diagnosis.

CASE I. — CARCINOMA. — *Clinical History.* — Mrs. A., of Wisconsin, aged about forty years, presented herself with a small tumor on the foot below the inner malleolus. The mass was of the size of a large hazel-nut, and had been some six months in growing. It was devoid of cuticle; and appeared like a fungus hæmotodes, except that there was little or no bloody effusion. The lymphatic glands were not perceptibly implicated at that time, but a section of the tumor placed under the microscope, showed very clearly the structure of carcinoma, or true cancer.

Ether having been administered, the tumor was excised. Locally, it was a cure; the disease never re-appearing in the original locality; however, in the course of a year or more afterwards, the lymphatic glands above began to show cancerous enlargement. About twenty-one months after the operation, we learn that she was attacked with violent pains in the head, and died in two or three days. No *post-mortem* examination has been reported to us.

Microscopic Examination.—Fig. 1 is an exact reproduction of a specimen of this tumor, as prepared by hardening it for some days in dilute chromic acid, and then shaving off very thin slices. The latter were steeped a few minutes in a solution of aniline, and then mounted on a glass slide. The characteristic struc-

ture of carcinoma or true cancer is very distinct. The framework of the mass consists of bundles (*trabecula*) of white fibres, surrounding rather large spaces or *alveoli*, as the pathologists term them; which, though varying much in size, average not very far from $\frac{1}{200}$ of an inch in diameter. These *alveoli* are packed full of rounded cells, which, however, do not adhere firmly to the walls of the cavities, nor to each other. Hence, in the thinner parts of the slice they may be brushed out, so as to leave only the fibrous framework, which is well shown in the engraving. This specimen is a soft cancer; but in hard cancers, the bundles of fibres are thicker. These *alveoli* packed full of rounded cells, constitute the essential microscopic character by which we distinguish carcinoma, or true cancer, from all other tumors.

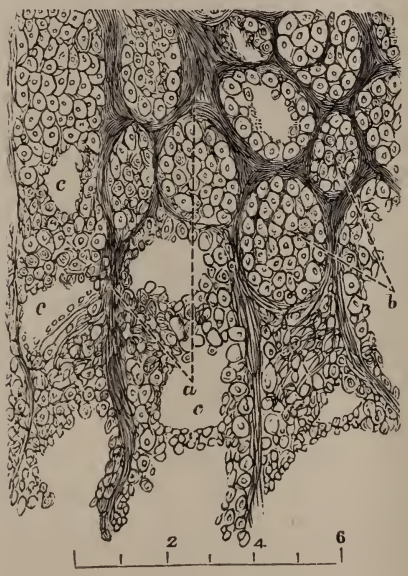

FIG. 1.—*a*, Fibrous framework. *b*, Alveoli, packed full of rounded cells. *c*, *c*, *c*, Alveoli, from which the cells have been partly brushed out.

CASE II. — SARCOMA. — *Clinical History.*—Miss B., aged twenty years, resided in Chicago. Six months ago, she presented herself to a surgeon with a moderate sized tumor in the subcutaneous tissue of the neck, and another of larger dimensions on the inner side of the right thigh. The surgeon consulted, removed the tumors, but after a moderate period, both returned in the same places. Six months later, she fell under our observation. She had now five tumors well defined, besides two or three small nodules, which seemed likely to produce similar growths. None of them were so situated that they could have been derived in the usual course from each other by transmission of germs along the lymphatics, but all were in the subcutaneous connective tissue. One was upon the right side of the neck, one on the right breast, one upon the left side of the abdomen, one on the outer, and another on the inner side of the right thigh. None of these tumors had produced the slightest perceptible induration or enlargement of their adjacent lymphatic glands. They had the general appearance, however, in other respects, of soft cancer. The one upon the abdomen had been lanced by a physician, in the hope that it might be an abscess, but only blood followed. This incision never closed, but put on the appearance of a fungus hæmatodes. From this growth, the specimen was taken represented in Fig. 2. There was no cachexia, and the patient seemed in good general health. Soon afterwards, however, the open ulcer on the abdomen gave origin to a malignant attack of erysipelas, which extending down to the groin, followed the connective tissue under Poupart's ligament, reached the interior, and produced a fatal peritonitis.

Microscopic Examination. — Specimens from this tumor are shown in Fig. 2. Part of the growth was what is called round-celled sarcoma, while another portion shaded off towards fibrous structure. There were no alveolar spaces, packed with loose cells, but some parts consisted of pure cells, while others were made up of adherent fusiform cells, shading off in places into a solid fibrous structure. Thus, though the mass contained both cells and fibres, yet the fibres enclosed no *alveoli*, and constituted no framework. Where fibres existed, they constituted the entire mass; and where round or fusiform cells prevailed, they, in like manner, constituted the entire structure, excepting, of course, that occasional blood-vessels penetrated the tissue.

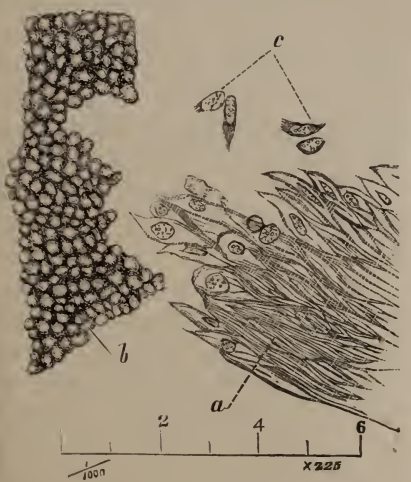

FIG. 2.—*a*, Mass of spindle-shaped cells. *b*, Mass of rounded cells from another part of the tumor. *c*, Elongated cells torn from the mass and adherent to each other.

Comparison of the Pathology. — If now we compare these diseases, we shall see an apparent reason for their different clinical history.

Pathologists at present are of the opinion that the *alveoli* of carcinoma are enlarged lymphatic spaces, and lined with the lymphatic endothelium. If this is so, the loosely connected cancer cells in them are inside the lymphatic system, and hence would naturally transmit germs along the lymphatic trunks to be developed wherever they might be arrested, which would usually be at the nearest lymphatic glands. This, if it shall be finally established, will fully explain the infection, and the almost exclusive multiplication of carcinomatous tumors along the routes of the lymphatic system.

On the other hand, the cells or fibres of sarcoma are judged by pathologists to be outside of the lymphatic cavities, and hence they transmit no germs along those routes, and do not infect the lymphatic glands.

As the cells of sarcoma are firmly adherent to each other, they are not easily dislodged and distributed by any cause, hence sarcoma is only occasionally found multiple.

The following tabular view will give a condensed and clear idea of the difference between the two diseases:

	CARCINOMA.	SARCOMA.
CLINICAL HISTORY.	The tumors generally multiply, and do so almost exclusively along the lymphatic routes; hence, after complete excision of the original tumor, there are usually contaminated lymphatic glands left which become carcinomatous tumors.	The tumors rarely multiply, and when they do it is almost never by the lymphatic routes; hence, after complete excision, there is considerable hope of permanent exemption from the disease.
MICROSCOPIC STRUCTURE.	The tumor consists of a fibrous framework, surrounding *alveoli*, or cavities averaging about 1–200 of an inch in diameter, which cavities are packed full of nucleated cells, rather larger than blood corpuscles.	The tumor consists either of rounded or spindle-shaped cells, which latter often assume the form of fibres, but the fibres do not enclose cavities filled with cells. In one region of the tumor, the cells, if they exist, constitute the whole tissue; or in another part, if fibres are found, the whole mass consists of fibres.

The cells are not adherent to each other, and hence can be easily brushed out of their specimens, leaving the fibrous framework empty.	The cells are adherent to each other, separating with difficulty.
The cells are either rounded, or else irregular like those of epithelium.	The cells may be rounded, but are often spindle-shaped, or even prolonged into fibres.
It is believed that the alveoli are dilated lymphatics, and consequently that the contained cells are inside the lymphatic system.	It is believed that the cells are outside of the lymphatic cavities.

Practical Conclusions. — Carcinoma and sarcoma are probably both local diseases in the outset, and could they be excised or otherwise destroyed sufficiently early, would result in a permanent cure. The fact is, however, that in carcinoma germs have usually been sent along the lymphatics, beyond the reach of the surgeon, long before the patient presents himself for treatment; hence, the removal of the original tumor does not prevent the recurrence in the lymphatic glands. The cancer, however, ought to be removed, and the earlier the better; and it would seem to be our duty at the same time to remove the corresponding lymphatic glands, even if they are not perceptibly enlarged, because their infection may be considered as already accomplished, though the development be not yet manifest. There is no rational doubt that early and thorough extirpation of cancer on the average prolongs life and comfort.

The removal of sarcoma is a much more hopeful procedure. The glands not being infected, the patient often shows little tendency to a recurrence after a thorough excision, so that an early and complete removal is above all things to be desired.

No. 6 Sixteenth St., Chicago.

CEREBRAL ABSCESS—HISTORY—DEATH—AUTOPSY.

By D. A. K. STEELE, M.D., LATE RESIDENT PHYSICIAN,
COOK COUNTY HOSPITAL.

THE following case came under my observation while an *interne* in the County Hospital, and may present some features of interest to readers of the EXAMINER.

Michael Ganning, æt. about fifty-five; laborer; native of Ireland; was brought to the hospital in an unconscious condition on the afternoon of August 19th. Learned from friends that he had been drinking heavily for some weeks, lying around in a stupid condition, supposed to be superinduced by his continued debauch.

On admission, patient lies in a semi-comatose condition; breathing somewhat stertorous, unable to protrude his tongue; eyes sunken and congested; pupils contracted; face expressionless; lips and mouth dry, and coated with sordes. There is partial paralysis of right arm and leg, most marked in the arm. Physical examination of the chest reveals harsh respiration. A sharp, metallic click follows the first sound of the heart at the base. Patient is unable to swallow, showing paralysis of the pharyngeal muscles. Pulse 78, full and hard. Temp. 102½°; resp. 36.

Ordered bowels to be moved by an enema, and directed the nurse to

endeavor to give him some liquid nourishment, milk, and beef-tea.

Aug. 20th, A.M.—Pulse 120; temp. 103°; resp. 42. Bowels moved. Unable to take any nourishment. Directed milk, per rectum.

P.M.—Pulse 168; temp. 104°; resp. 48.

Aug. 21, A.M.—Body assuming a cyanotic appearance. Pulse 168, very weak; temp. 104½°; resp. 60. Urine passed involuntarily.

P.M.—Symptoms increasing in gravity; died at 3 o'clock.

Post-mortem examination, eighteen hours after death.

Rigor mortis marked. Body cyanotic.

On removing calvarium, find the superficial veins of the brain distended with venous blood.

On removing the brain, with the exception of the superficial hyperæmia above noted, its general contour seems normal, except at the inferior portion of the middle lobe of the left hemisphere, just where it lies in apposition with the petrous portion of the temporal bone, and immediately in front of the tentorium cerebelli, where a portion of the brain substance about two inches in diameter was found quite soft. While examining the softened portion, a quantity of pus escaped from what seemed to be an abscess.

On section from above of the right hemisphere, it seems normal, with the exception of a small quantity of pus in the right lateral ventricle, which was afterwards found to have escaped from the abscess.

On section of the left hemisphere, found all that portion above the lateral ventricle normal in consistence and appearance.

Left lateral ventricle found filled with pus, and communicating with the abscess.

On section below the lateral ventricle, found the brain substance very much congested and softened, and in the inferior portion of the middle lobe, found an abscess about one and a half inches in diameter, communicating with the left lateral ventricle, from which the pus escaped externally, and into the ventricles, as previously noted. The cerebellum seemed healthy. A moderate amount of sero-sanguinous effusion was found at the base of the brain.

On opening the chest, found firm pleuritic adhesions of both lungs. In the right chest, extending from the second rib, and attached to the seventh, about two inches below the costo-sternal articulation, found an ossified plate about an inch wide and six inches long, curved at its inferior extremity, where it was attached to the seventh rib—it apparently had been developed in the costal pleura. Has no pathological significance. Lungs healthy. Pericardium thickened and adherent to the pleura. Heart weighed thirteen ounces. Mitral and aortic valves thickened. Left ventricle dilated slightly. Spleen small. Liver normal in size and appearance. Kidneys intensely congested; each weighed six ounces. Other organs not examined.

Editorial Department.

WOMAN'S HOSPITAL MEDICAL COLLEGE.

THE fifth annual commencement of the above institution was held on the evening of March 2d, at the First M. E. Church. A large audience of ladies and gentlemen were present. The introductory exercises consisted of an organ voluntary, an invocation by the Rev. Dr. Thomas, and a song quartette. Prof. Bartlett gave the usual address on behalf of the faculty. It consisted of a general exposition of the profession, characteristics of habit and talent necessary for success in medicine, and congratulations and advice to the graduating class.

After another song, Prof. Byford, as President of the Board of Trustees, presented, with a brief but appropriate address, diplomas to the graduating class, consisting of the following persons: Miss Sarah A. Brown, Wis.; Miss Lottie Calkins, Ills.; Mrs. Julia N. Marsh, Cal.; Mrs. Sarah H. Stevenson, New York; Mrs. Elizabeth D. Shelton, Kansas; Mrs. M. P. T. Wagstaff, Kansas; Miss Delight J. Wolf, Mich.; Miss Edith A. Root, Ill.

Sarah A. Brown in behalf of the class presented Flint's Physiology to Prof. Mary H. Thompson, which act was nicely acknowledged by the professor.

Mrs. Sarah H. Stevenson read not only an interesting but also an instructive thesis on the "Evolution of the Heart." Commencing with the mere cell, from which she ascended rapidly up through the vegetable kingdom and lower species of animals, to the heart of the mammalia, showing the various steps of development in the *modus operandi* of conveying the nutritive material to all parts of these various living organisms.

The same lady also delivered the class valedictory. It contained more germs of truth and praiseworthy eloquence than we generally hear in such addresses.

A few remarks by Rev. Dr. Thomas closed the exercises.

AMERICAN MEDICAL ASSOCIATION. —We hope the profession of the Northwest will remember that the next meeting of the American Medical Association is to be held in Louisville, Ky., commencing on the morning of the first Tuesday in May next. Let every State Medical Society, and every City, County, and District Medical Society entitled to representation in their State Society, see to it that their delegates are appointed, and that they attend the meeting. From information which we have received, we anticipate an unusually interesting and profitable meeting. Assurances of attendance on the part of some of the most eminent men in New York and New England, add to our confidence, that the meeting will be a good one; and also to our desire that the profession in the Northwest should be well represented.

Correspondence.

A MORNING IN THE CHARITE HOSPITAL.

VIRCHOW.—Eight A.M., on a cold, winter's morning in Berlin, is *schrecklich* early, but if you wish to attend Prof. Virchow's lecture, you must find your way by that time to the Pathological Institute, which is built in one of the many quadrangles of the great Charity Hospital. On the lower floor are the museum and dissecting rooms; above, the room for microscopy, a reading room, in which is placed Prof. Virchow's immense library, to which his students have free access; and adjoining this, a lecture-room, elegant in hard woods and fresco. About the room, something in the fashion of a Grecian border, rectangulates a long table, with a miniature track running its whole length, not as a toy railroad, as it might seem, but as a means of transit for the score of microscopes which stand waiting at the farther end. Close by, are as many more bright red platters, heaped high with broken bits of poor humanity; for, as all who die in the great Charite must pass through this institute, there is never lack of material. To-day's platters, for instance, show carcinoma of the stomach, liver and œsophagus, pleuro-pneumonia, hydrocele, aortic sclerosis, carnification of the lungs, granular pharyngitis, renal cicatrices, and diphtheritic membranes, *ad salictatem*, for just now diphtheria happens to be epidemic.

"Meine Herren," says a little, jaundiced, shabby object, that might easily be mistaken for an old clo' man; and without further introduction, Herr Prof. Rudolph Virchow takes up the first platter and begins a dissertation upon cancer; illustrating his theories by diagrams in colored chalks upon the blackboard and by appropriate specimens. At the same time, microscopic preparations to illustrate the histology of the subject under discussion, were traveling along the railway, of which we have just spoken. So pass two or three hours, according to the amount of material on hand, Virchow speaking continuously all the while, spicing his remarks every now and then with a growl at a dilatory student, or a fling at Christianity, to enjoy which he would go further out of his way than John Randolph is said to have done to kick a sheep.

FRERICHS.—*F. Th.*, 11–12, *Medical Clinic*, *Charite*, says the *stundenplan*, so hurry across the quadrangle, or you may be obliged to claim your seat *vi et armis*, if you can; for in spite of cards and numbered places, the best seats on the front rows are an almost daily cause of "unpleasantness" between America and Germany. To-day, victory sides with our glorious bird, and we post ourselves at the head of the camp bedstead, upon which has just been brought in, a woman with a head as big as a peck measure. Moon-faced, fatherly Frerichs removes the cotton batting, and we behold a most gorgeous case of facial erysipelas, with bullæ attached. Over this he lingers, as if loth to let

so beautiful a specimen depart, telling us of erysipelas variegata, marginata, dermatosa, bullosa, etc., etc.; but at last directs that a cathartic should be given, and sends her away, having repacked her in cotton wool.

Next comes an unfortunate man, who has been suffering for nearly five weeks from intestinal war and subsequent blockade. Nearly the whole German pharmacopœia has been poured into him, and still the port will not open. Why? "Purulent exudation, paralysis of the *darmmusculature*, obstruction from gall stones, scybala, intussusception, incarceration, angulation and ulceration," are all suggested as possible causes, but which is to blame, will be shown certainly by the post-mortem. [Here to enliven the patient, drawings from similar cases, and sections from diseased intestines were passed about.] "In the meantime, gentlemen, we will try to diminish peristaltic action by small doses of opium. Will use large injections of tepid water, also; and if tympanitis becomes too great, will draw off the accumulated gases by means of an explorative needle."

N. B.— Two days later, patient furnished very interesting *obduction*.

Gleanings from Our Exchanges.

ÆTIOLOGY AND TREATMENT OF PNEUMONIA.

DISCUSSION OF NEW YORK ACADEMY OF MEDICINE, FEBRUARY 4, 1875.

From New York Medical Journal, March, 1875.

THERE was a large gathering at the Academy to hear the discussion on the "Ætiology and Treatment of Pneumonia."

Dr. Austin Flint, by request of the President, opened the discussion by indicating some points of interest that might be freely considered. He noted first the diverse characteristics of the disease at different localities, and at different times in the same localities. In the Southern States pneumonia has always been a more grave disease than it has been in the North. Again, the disease as it manifests itself at the present time in this city is of a more dangerous character than we are usually in the habit of considering it. Dr. Flint gave, in this connection, the brief histories of several cases which came under his care during the month of January, each of them dying in a few days. As regarded the treatment of the disease, he took up fully the use of bleeding as a therapeutical agent, and considered the views and results of Louis on this matter. Louis reported seventy-eight cases in which there were twenty-eight deaths; he reported also other twenty-nine cases, having four deaths. In his observations he did not regard the subject of mortality, but simply whether bleeding did or did not have a tendency to shorten the disease. The conclusions that he arrived at were, that if bleeding were practiced in the earlier days of the disease, it not only had a happy effect, but shortened its duration by four or five days; whereas, if the bleeding were delayed till late in the disease, no good effect was obtained. Jackson reported fifty-one cases in which he had eight deaths.

His treatment was the same as that of Louis. Dr. Flint reported one hundred and thirty-three cases that came under his own observation, and in which bleeding was practiced only in twelve of them. There were thirty-five deaths, but a point of interest connected with them was that they were observed in different cities: sixty-four at Buffalo, with eleven deaths; eleven at Louisville, with seven deaths; fifty-eight at New Orleans, with seventeen deaths. He said also that there was one very important thing to bear in mind in the consideration of pneumonia; and that was that when the inflammation was confined to a single lobe, and there were no complications, the tendency was to recover; and as regards the treatment, whether bleeding exerted an influence in preventing the complications which might arise, such as gangrene of the lungs, extension of the inflammation, pericarditis, and heart-clot. He referred also to the value of opium in diminishing the constitutional disturbance; and to the plan presented latterly, of keeping the heat of the patient down by antipyretic treatment. He was in favor of the administration of quinia, and had seen marked benefit from its use. Dr. Flint read a short description from a medical periodical of pneumonia developing in a high school which had been exposed to the influence of sewer-gas. The facts were as follows: The sewer authorities, in defiance of the protest of the principal of the school, placed a ventilator so as to infect the institution with sewer-gas. Shortly after a number of cases of pneumonia developed, and, as a consequence, the school had to be closed. For many years previous to this there had been no sickneas in the institution, and, when the ventilator was removed, no new cases occurred, leaving the strong inference that the sewer-gas was the peccant agent.

Dr. W. H. Thomson read the histories of five cases of pneumonia which had recently been under observation in Bellevue Hospital, and in which the main treatment had been antipyretic. The method pursued was to apply to the chest ice-bags till the temperature fell. Of the five cases only one proved fatal. Dr. Thomson read a selection from Niemeyer bearing out his opinions as to the effect of cold in keeping down the temperature and improving the chances of the patient. He said also that the medicinal treatment consisted in the administration of ten grains of the carbonate of ammonia every two hours, with one grain of quinia every hour.

Dr. A. L. Loomis said that in the consideration of pneumonia the two main elements to bear in mind were the ætiology and treatment; and of the causes the most important was age. We saw it mostly between twenty and forty years, and again after sixty—the pneumonia of children was broncho-pneumonia. The predisposing cause was the cause of the disease, and by the predisposing cause was meant anything that lowers the vitality of the patient. Here in New York we are all staggering under the influence of malaria, and with any slight exposure there may follow a pneumonia. Inanition, the continual use of alcoholics, the poison of sewer-gas, septicæmia, rheumatism, pyæmia, and all those conditions which debilitate, render the system at any time liable to an attack from a cause which, in sound health, would prove inoperative. Dr. Loomis said also that, in his experience, idiopathic pneumonia was of such rare occurrence that he questioned its existence. He did not think there could be much difference of opinion as to the injury received from venesection in pneumonia, where the predisposing cause was debility; the indication was to find and combat the cause of the debility. As to the use of ice in the treatment of the disease his opinion was decidedly against it, though he was sorry he had not a more extensive experience. He found that it kept down the temperature as long as it was applied to the chest, but he found also that at the same time there was a tendency for the disease

to spread. He found, on coming on duty at the Mount Sinai Hospital, several cases treated by ice, but they all died. The cause of the high temperature was the metamorphosis of tissue that takes place, and the remedy, in his experience, that prevented this change was the sulphate of quinia. He had found a full dose of the drug to lower the temperature from one to one and a half degrees, and considered that ten grains should be given at a dose. When the heart began to flag and grow weak the remedy was alcohol. He found it the only thing to be relied on to stimulate the heart to renewed activity, and ward off œdema of the lungs and other causes of failure of the circulation.

THE CONTAGION OF PUERPERAL FEVER.

From the Lancet, January 23, 1875.

THE contagious nature of puerperal fever, and the various ways in which it may be communicated, is a question of the greatest importance to both the profession and the public. A knowledge of what has been written on this point, and of the many interesting cases bearing on it, ought to be in the possession of every one who intends to practice midwifery, for without such knowledge he may unconsciously carry with him the contagion, and communicate it to those under his care; and even with such knowledge, it may be in some instances impossible to avoid becoming the agent of this terrible disease. Puerperal fever is a term which embraces a number of diseases having different causes, symptoms and anatomical lesions. One class of these maladies is that brought on in the puerperal woman by contact with the poison of an acute specific disease, as typhus or erysipelas. In these cases there can be no question of the contagious character of the affection, for instances are recorded in which the puerperal woman has been the means of communicating the original disease to a third person. Another class of cases is that which is due to absorption by the vagina of a poison introduced by the examining finger of the accoucheur. The poison in these cases may be the cadaveric or decomposing animal matter, such as the discharge from the generative organs of a patient suffering from puerperal fever; or it may be the contagion of an acute specific disease. There is a third class of diseases which is included under the term puerperal fever, which is generated within the body of the patient, the cause being decomposition and absorption of coagula or portions of the placenta retained in the uterus, or the breaking up and entrance into the circulation of a clot which has formed in the uterine vessels. The form of the disease depending on the introduction into the vagina or the formation within the body of a poison other than the acute specific contagion, is not contagious in the sense that typhus fever and erysipelas are, but it is certain that it is not unfrequently communicated by the intervention of a third person, that person being the medical attendant. Numerous instances are on record of outbreaks of puerperal fever, in which all or almost all the cases occurred in the practice of one man. Dr. Armstrong says that out of forty-three cases which occurred in Sunderland in 1813, forty happened in the practice of one surgeon and his assistant. Dr. Gordon observed, with reference to the epidemic which took place in Aberdeen in the year 1789–90, that the disease attacked such women only as were visited or delivered by a practitioner, or taken care of by a man who had previously attended patients affected

with the same disorder. Roberton states that from December 3, 1830, to January 4, 1831, a midwife attended thirty patients for a public charity; sixteen of these were attacked with puerperal fever, and they all died. In the same month, 380 women were delivered by other midwives for that institution, but none of the 380 suffered in the smallest degree. Evidence of this kind might easily be multiplied, but we have said enough to show that the disease is in some cases contagious in the sense typhus is, and that in all cases it is communicable by the accoucheur or midwife. And this is not to be wondered at, for we know how difficult—nay, how impossible—it is for some time to remove from the hands which have been engaged in making a post-mortem examination the odor of the cadaver, even by the most abundant ablutions and the careful use of disinfectants. We know also, what a small quantity of septic poison is sufficient to engender a fatal disease even in a healthy person; but in the puerperal woman the poison acts at a great advantage, because her system is in a more or less exhausted state after the parturient efforts, and it is engaged in throwing off waste products—the wasting from severe muscular action and from the involution going on in the uterus. Besides, the poison when communicated by the examining finger, is introduced to a part capable of absorbing rapidly, and one which, at that time, is wounded, bruised, and sore from the mechanical violence to which it has been subjected. Under these circumstances, the patient is peculiarly susceptible to the slightest contagion or inoculation. Again, practitioners of midwifery find it their duty frequently, during the first few days after labor, to examine the vaginal discharge. In this manner their hands become more or less tainted; and if the patient be suffering from puerperal fever, this taint is sufficient, even after the most careful washing and use of disinfectants, to communicate the disease to a patient examined soon after. With midwives it is far worse, for generally they act both as nurse and midwife to the poor patients on whom they attend; and thus they have daily to perform the part of nurses, and consequently have their hands, however careful they may be, always tainted with discharge. Add to this the slightest carelessness in the use of soap and water and disinfectants, and there is at once formed a propagator of disease who carries death wherever she goes. This double function of midwives is probably the reason that, in recent outbreaks, they have played a more prominent part than professional men. What, then, are the duties of the medical practitioner in whose practice a case of puerperal fever has occurred? He may change his clothes, he may take any number of baths, he may use all sorts of disinfectants, and still the fatal poison may hang about him, and he may be the bearer of it. Under these circumstances he should refrain from practicing midwifery for a season. It would be wantonly wicked in us were we to speak hesitatingly when such issues are at stake. The danger to the public arising from the non-observance of the precautions above named are incalculable, as we have seen in the outbreak in the neighborhood of the Wandsworth road and at Coventry; and whatever sacrifice the medical man may have to make in carrying out the precautions named, we unhesitatingly say he should make it. In the majority of cases, however, the sacrifice to be made would be very light indeed. Three years ago, an outbreak of puerperal fever took place in a provincial town of considerable size. On investigation, it was found that all the cases had occurred in the practice of one surgeon and one midwife. The members of the profession located in the town met and requested the gentleman in question to refrain from practicing midwifery for one month, and at the same time agreed to attend his cases for him. The midwife was likewise requested not to attend cases for a similar period. This was agreed to, and no new cases occurred after that

date. This illustrates well the line of conduct that should be adopted by the profession in any town where this terrible disease may happen to appear. The unfortunate practitioner in whose practice the case has occurred should bring it before the profession, and should cease from attending midwifery for a time. On the other hand, his professional brethren should help him through his difficulty, and make his loss as small as possible by attending his cases for him during the period of his abstention.

CLINICAL LECTURE ON THE USE OF DIGITALIS IN DISEASES OF THE HEART.

DELIVERED AT THE PHILADELPHIA HOSPITAL BY H. C. WOOD, JR., M.D.

From the Canada Medical Record.

THERE are, gentlemen, primary physiological facts concerning the action of digitalis which I shall to-day lay down somewhat dogmatically as the premises for the discussion of the subject. I do this because time is wanting in which to give you the proofs of these premises, even if they were not out of place in a clinical lecture-room; and I do it the more willingly because those of you who may be inclined to be skeptical can find these proofs in detail in my treatise upon therapeutics.

By experiments upon the lower animals two things have been definitely ascertained: 1, That in the lower animals digitalis is a very powerful stimulant to the inhibitory apparatus of the heart; and 2, That it is also a powerful stimulant to the muscular substance or its contained ganglia.

We know the first, because after the administration of the drug, when the heart has already been affected by it, and is beating slowly, if the inhibitory nerves be cut, the organ springs, as it were, into an intense rapidity of action. The drug stimulates the cardiac muscle, because the amount of work performed by the heart is vastly increased under its influence, even when the viscus is disconnected from the body. We also know as a probable fact that digitalis causes a general vaso-motor spasm, a contraction of the muscular walls of the vessels. This much for the observations made on the lower animals.

When digitalis is administered to man, the first thing we observe is a diminution in the number of heart-beats, and an alteration of the character of the pulse, which becomes full, and hard, and strong. You can recognize by the feel of the blood-wave that both the force of the contraction of the heart and the amount of blood thrown out during the systole are increased. If the drug is given in poisonous doses, the pulse may, it is true, become rapid, and smaller than normal. The meaning of this can be explained by referring again to the animal. We find that here the same phenomena are observed, and that if a very large dose is given the heart may be suddenly arrested in systole from irritation of the cardiac muscle; before this happens, for a time, the tendency to contract is so great that the systole will occur before the complete filling up of the cavities. Two short, imperfect waves are thus produced instead of one long one: this is the double-beat, forming a dicrotic pulse. In man the "dicrotic pulse" of digitalis is classical, and its mechanism is evidently the same as that of the double arterial wave of the lower animals; instead of a long pause and a full dilatation, the first attempt at diastole is interrupted by an abortive systolic contraction. As in animals, probably in these cases also, the apex of the heart scarcely relaxes at all. Again, a person under the influence of digitalis may have a heart beating 50

or 60 per minute when in a recumbent posture, but on sitting up the pulse may suddenly become weak and mount to 100 or 120. The action of digitalis has been carried in such a case to the point at which an excess will throw stimulation into over-stimulation and imperfect contraction. The act of rising brings an extra strain on the heart, and the muscle loses its power of regular action.

Digitalis, then, in man, by its action on the inhibitory apparatus, prolongs the period of diastole, thus giving time for the ventricles to fill up with more blood than usual, and also increases the muscular power of the heart, so that when it contracts a greater volume of blood is thrown with a greater force into the arterial system. Before we begin to apply these principles, remember also that the vascular system under the control of the vaso-motor nerves is probably kept in a state of contraction by the influence of digitalis.

Almost nothing but common sense is needed now to apply these facts to the treatment of heart diseases. If what has been said is true, digitalis ought to be useful when there is a deficiency of heart-power. Remember that it is not a rag that will stop a leak, and do not fall into the common error of expecting the drug to perform impossibilities. It cannot tighten a leaking valve. It cannot open and smooth down a contracted orifice. In other words, in valvular lesions it can only indirectly remedy the defects; and although often you will get the most surprising results from its use, yet in every case of valvular lesion there comes, sooner or later, a stage when digitalis is powerless. It is when the valves are healthy, and the cardiac failure is due simply to the weakness of the muscular walls that digitalis exerts its most wonderful powers. Nothing is more marvelous in clinical medicine than the relief you can sometimes rapidly afford in cases of simple dilatation of the heart.

INTERESTING EXPERIMENTS UPON THE BODY OF HEIDENBLUT, THE MURDERER.

Philadelphia Correspondence, Boston Med. and Surg. Jour., Feb. 25, 1875.

INTERESTING experiments were performed a few days since upon the body of Heidenblut, the murderer, directly after his remains were removed from the gallows. Those upon the laryngeal nerves were instituted at the request of Dr. Weir Mitchell, and were skilfully performed by Dr. W. W. Keen, with the assistance of Dr. Carl Seiler. In the *Medical Times and Gazette* for December 19, 1874, was published a paper read by Dr. George Johnson before the Royal Medical and Chirurgical Society of London, to demonstrate and explain the theory that bilateral spasm and bilateral paralysis of the larynx may result from the pressure of an aneurism, or other tumor, upon the pneumogastric nerve of one side only. Reference was made to two cases of aneurism, one of the innominata, one of the aorta, which caused bilateral palsy of the larynx during life. After death, however, it was found that the vagus of one side only was involved. In both cases the laryngeal muscles of both sides were paralyzed, and Johnson's theory was that this was due on one side to direct pressure; on the other to reflex action. Dr. Johnson further said that pressure on one recurrent nerve (which is supplied with efferent motor fibres only, originating in the spinal accessory), will cause direct unilateral paralysis of the larynx, but cannot cause bilateral spasm or bilateral palsy. On the other hand, pressure upon the vagus involving its afferent fibres may

cause both spasm and palsy of bilateral character. The reason for this bilateral action he considered to be the intimate connection between the nerve-nuclei of the two sides, thus according with the views of Dr. Broadbent. Dr. Lockhart Clarke has demonstrated that three sets of commissural fibres connect the nerve-nuclei of the origin of the spinal accessory, and this fact was also used by Dr. Johnson in support of his theory. At the same meeting, Dr. Powell stated that he had obtained like results in the dog, but called attention to the difference which exists in different animals, and added that faradization of one recurrent in the cat produced abduction of both cords. "Dr. John Reid," said Dr. Powell, "produced bilateral spasm in the larynx of the dog, by galvanizing one recurrent." Some years ago, Dr. Weir Mitchell discovered a remarkable chiasm in the laryngeal nerves of the turtle, and also experimented upon the cat and rabbit, but without result. He did not examine the dog. These statements of the English physicians, therefore, prompted his proposal that Dr. Keen should aid him in new experiments to determine these assertions in case of the dog. A few days later, Dr. Keen was invited to attend the execution of Heidenblut, and thereupon came the idea of making these experiments upon the human body directly after death.

Within thirty minutes after the execution of the criminal, Dr. Keen carefully dissected out the pneumogastric of one side, insulated the nerve by means of strips of pure rubber cloth, and then applied the two wires of the battery directly to the nerve. Meanwhile, Dr. Seiler attempted to watch the action of the larynx in the ordinary manner; but the hyoid bone of the subject had been fractured, thus closing the pharynx. Besides this, the throat of the dead man was occluded by a tenacious mucus, so that it was impossible to see the larynx. Dr. Keen therefore made an incision just above the thyroid cartilage, large enough only to admit the mirror, and recommenced the faradization of the nerves. I should remark that the vertebræ were neither fractured nor dislocated. This is the third case of judicial hanging in which Dr. Keen has verified this condition of the spinal column. The sterno-cleido-mastoid muscle of the right side had, however, been completely torn asunder by the pressure of the rope, the sheath being the only bond of union. Both vagi were apparently uninjured, and the recurrent nerves had been untouched by the rope. Upon re-applying the current, the vagus responded perfectly; but only one side of the larynx was affected. In spite of a forty cell current, and in spite of the afferent fibres which this nerve contains, no other result could be produced. Bilateral action of the vocal cords by galvanization of one recurrent nerve could take place only in case a chiasm existed between the laryngeal nerves (because this nerve contains only efferent motor fibres), and no such chiasm was found; only one nerve responded. Except it be that in this case the nerve centres were injured by the pressure of the rope, thus preventing a transmission of the current from one set of nerve-nuclei to the other, these results would seem to refute the assertions of Dr. Johnson.

Dr. Keen next galvanized the phrenic. The nerve did not respond. He then applied the current to the intercostal muscles, and proved most satisfactorily that the internal intercostals are muscles of inspiration and that the external intercostals are muscles of expiration; the former lifting the ribs, the latter depressing them. This manner of testing these muscles, which Dr. Keen was probably the first to attempt, will undoubtedly decide the question as to their real function, touching which there has been so much confusion of opinion. He also tested some of the facial muscles in relation to the part they take in expression, and found that the pyramidalis nasi, as stated by Darwin, is a direct antagonist to the occipito-frontalis.

Dr. Keen read a paper giving the results of his experiments upon Heidenblut, before the college of Physicians on Wednesday evening last. The details will therefore soon be published. Dr. Keen closed his paper by calling attention to the important results which this new method of investigation, namely, faradization of the muscles of the recently dead, promises to yield.

"In the living body, it is almost impossible to obtain the action of a single muscle, especially in the face, where the emotions, as pain, amusement, etc., involuntarily arouse the action of other muscles. In the recently dead, the results will be far more accurate, and therefore to the anatomist, physiologist, and artist, are of the greatest interest and importance."

UNGENANNT.

Philadelphia, Feb. 5, 1875.

RAW-COTTON DRESSING FOR WOUNDS (PANSEMENTS A L'OUATE).

BY PROF. WILLIAM H. VAN BUREN, M.D.

From New York Medical Journal, March, 1875

I CANNOT leave this subject without calling your attention to a novel mode of dressing wounds with raw cotton, which has lately attracted much attention in Paris. I have already spoken of raw cotton as an American remedy in burns, but great advantages are now claimed for it as an application for recent wounds; it is said to protect them from the contact of the poisonous particles which are assumed as everywhere floating in the air as dust. These poisonous particles, in the present state of our knowledge, are supposed to be bacteria, or the spores of some analogous organism, capable of getting into the blood through open wounds, and acting as a ferment, or, at least, of being carriers of poison. So-called zymotic diseases, such as pyæmia and erysipelas, which interfere so often with the successful treatment of open wounds, especially in hospitals, are generally believed to owe their origin to this cause. Now, Pasteur, who discovered that putrefactive fermentation was due to the presence and growth of vegetable organisms, and Tyndall, who has experimented largely upon atmospheric dust, had both proved that raw cotton was the most effective filter by which the air can be deprived of these floating particles; that, when forced to pass through its meshes, air is rendered pure, as far as these poisonous particles are concerned. During the winter of 1870–71, when the hospitals of Paris were crowded with wounded soldiers and Communists, accumulated through the coincidence of the Prussian siege, the civil war, and famine, and when pyæmia was so universally prevalent that an amputation was almost of necessity fatal, this assertion of Pasteur concerning the filtering power of raw cotton occurred to one of the surgeons of the St.-Louis Hospital, Alphonse Guerin, as a possible source of advantage. He forthwith tried it as a dressing on several patients, binding it upon their wounds in liberal quantity, and keeping it accurately applied by firm compression of bandages. To his surprise and delight he found that the chill, by which the advent of the fatal complication is always heralded, did not occur, and his patients went on to get well. Encouraged by this experiment, he repeated it with equal success; those dressed with raw cotton were found to do well, while others in the same ward died of the prevailing endemic. The result was so remarkable that surgeons came from other hospi-

tals to St.-Louis to witness the rare sight of patients recovering after amputation, and themselves adopted this mode of dressing wounds. Shortly, the use of raw cotton was systematized as a surgical dressing, and it has since been very generally employed. Desiring to learn the estimation in which it is now held, I sought information from my colleague, Dr. L. A. Stimson, who is at present in Paris, and I find that, although the prevalence of pyæmia has of course very much diminished in the hospitals, the raw-cotton dressing is still regarded favorably. It is claimed by Dr. Guerin, in recent communications to the French Academy (March 23 and May 18, 1874), that, in accordance with Pasteur's assertion, when properly applied, it effectually excludes a recent wound from contact with all poisonous germs—*without entirely excluding air*. He has found pus, in contact with a wound which had not been disturbed for thirty days, perfectly fresh in appearance and free from odor; it was changed in its anatomical and chemical characteristics, contained no traces of pus-cells, was converted, in short, into an oily emulsion containing large crystals of the fatty acids—showing that oxygen had not been excluded—but it presented no evidences whatever of putrefaction. In his earlier experience he once removed the dressing from two cases, which were doing perfectly well at the end of a week, and within three days both patients had chills, followed by fatal pyæmia. This led him to adopt the plan of applying the cotton-dressing with great care and precision at first, so that its renewal should not be necessitated until the establishment of a barrier of granulations, or the final healing of the wound. If the discharges saturated the cotton and made their appearance upon the surface of the dressing, additional layers of cotton wadding were applied over the old dressing without regarding bulk, and, over these, bandages put on with the greatest possible amount of compressing force; for it is found that where the cotton is applied in sufficient quantity, and of good quality, its elasticity renders the compression equable, and that, so far from being a source of danger, the elastic compression is advantageous. After a circular amputation of the thigh, an assistant steadies the stump, while another pulls apart the edges of the divided integument, and the surgeon proceeds to fill the cavity thus presented to him with small masses of cotton torn from the sheet of wadding, small at first and applied accurately to every part of the cut surface, then larger masses as it becomes filled, and then layers of the wadding are applied over and around the stump and upon the hip and pelvis, and over all a spica-bandage put on with great care, and as much compressing force as possible. No air must come in contact with the wound that has not filtered through the thick mass of cotton. Moreover, this cotton must be of good quality, fresh from the manufactory, and it must not have been exposed to the air of the hospital. Under favorable circumstances he has found it the best plan to leave this dressing in place about two weeks, when the granulating surfaces are usually found ready for approximation for final union, but he never renews a dressing in the foul air of a ward. Tarlatan and collodion straps are preferred to strips of plaster, as more transparent. He *has* obtained *primary* union. Guerin believes, with Lister and Tyndall, that while gases can be introduced into the blood through the lungs, poisonous particles like germs become entangled in the air-passages, and do not as a rule reach the blood by this route. The experiments and deductions bearing on this point are full of interest to the student of surgery, but the point is not as yet definitely settled; for Tyndall himself, in detailing the advantages of using a "cotton-wool respirator," remarks that "it is exceedingly probable that the germs which lodge in the air-passages, or find their way into the stomach with its absorbent system, are those which sow in the body epidemic disease." He adds: "If this be so, then disease can be

warded off by carefully-prepared filters of cotton wool" (*vide* "Dust and Disease," in "Fragments of Science," etc., London, 1871, p. 321, *et seq.*).

It is a curious fact that Lister, the great advocate of the germ theory of disease, and of carbolic acid as a germ-killer, at one time was actually using raw cotton as a dressing for wounds, on account of its value as a filter, antecedent to its adoption by Guerin, but he afterward abandoned it in favor of his "antiseptic gauze" (*Pansements a l'Ouate*," par Raoul Hervey, *Archives Generales de Medecine*, December, 1871, *et seq.*). Guerin's advocates say that the Edinburgh surgeon was so pre-occupied and absorbed in finding out the best modes of using carbolic acid for the killing of germs, that he failed to recognize the probably greater value of the raw cotton as a filter in the dressing of wounds. It is one of the features of Guerin's mode of dressing, to wash a wound thoroughly with some germ-killing liquid, before applying the cotton; but he seems to attach as much value to weak camphorated spirits as to a solution of carbolic acid, using them indifferently.

In conclusion, it is claimed for this new method of dressing wounds, that besides protection from poisonous germs, it prevents inflammation, by its uniform elastic compression, the equability of temperature, the protection from external injury, and partial immobility which it confers; that it promotes the development and growth of granulations, saves the pain and trouble of frequent dressings, and facilitates the transportation of wounded men. It thus favors the scattering of the wounded after a battle, and for this reason, as well as the simplicity of the materials required, and the ease with which they can be applied, it commends itself to the military surgeon. In civil practice it promises to be useful, principally in the large hospitals of great cities, where pyæmia and erysipelas are always liable to become endemic, in preventing poisoning of open wounds by these diseases, and also by thus enabling surgeons to save limbs which might otherwise require amputation.

"SHADOWS FROM THE WALLS OF DEATH."—Facts and Inferences prefacing a book of Specimens of Arsenical Wall Papers, gathered by R. C. Kedzie, M.D., Member of the State Board of Health of Michigan.—The above is the rather sensational title of an interesting and instructive paper upon an important subject. The danger attendant upon the use of paper hangings colored green with arsenical pigments (Scheele's green and Sweinfurt green—arsenite and aceto-arsenite of copper) is not so well known, either to the profession or to the public, as it ought to be. The State Board of Health of Massachusetts sounded the alarm, in 1872, by the publication in its annual report of an able paper "On the evil effects of the use of Arsenic in certain green colors," by Dr. F. W. Draper. The State Board of Health of Michigan now utters a similar warning, through this paper of Dr. Kedzie, and the accompanying book of samples of poisonous wall-paper.

"Perhaps," says the author, "we could not devise a more effectual way to contaminate the air of our houses with a small amount of arsenical dust than by the use of wall-paper colored with arsenical preparations. The large amount of surface exposed, the feeble adhesive power of the size by which the pigments are fixed, the frequent alternations of heat and cold, moisture and dryness, by which the adhesiveness of the size is still more diminished, the currents of air always circulating in a warm room, mechanical displacements by sweeping, dusting, etc., all combine to dislodge the pigments from their position on the paper, and to scatter them in the form of a fine dust in the room, and this dust

may be many hours or even days in settling. * * * This suspended dust is swept along with the air in inhalation, and is lodged upon the mucous surface lining the nasal cavities, the windpipe and its ramifications. * * * This may explain the frequent occurrence of catarrh and bronchitis in those persons who occupy rooms prepared with arsenical wall-paper."

Dyspepsia, neuralgia, pains in the bones and joints simulating chronic rheumatism, headache, general debility, etc., are also enumerated as symptoms which often attend this insidious form of poisoning; their occurrence being readily explained by the absorption of the poison. Want of space, however, prevents our going into a full consideration of the subject, and we content ourselves with the citation of two or three of the cases which are reported by Dr. Kedzie as having occurred under his own observation, or within his knowledge.

1. Dr. J. H. B. and his two boys. The doctor's bed-room was papered with wall-paper of a grayish color, toned with green, and had a few bright green flowers or leaves. His boys occupied a bed-room next to his, and the door between the rooms was open at all times. The Doctor was troubled with severe pains in the bones, symptoms of chronic rheumatism, and constant cough. The boys became affected with pains and rheumatic soreness. Suspicion was aroused that the wall-paper might be the cause of this illness, and the paper was analyzed, when it was found to contain 5.47 grains of arsenic to the square foot, or six ounces of arsenic on the walls of a single room. * * * The paper was at once removed, and the Doctor and his boys entirely recovered.

2. The children of the Hon. L. D. W. Emma, aged nine, occupied a bed-room, the walls of which were covered with paper of a greenish stone color, with bright bands of green. Soon after occupying the room, she exhibited the following symptoms: Lameness, resembling rheumatism, darting pains in various parts of the body, languor in the morning, feverishness, pains in the head and frontal sinuses, sores in various parts of the body, "faint spells," and great loss of flesh. The best medical advice that could be procured was obtained, but no essential improvement followed. Whenever she left home for a time her health improved, but she relapsed into her former condition on returning home. The paper on the wall was analyzed, and found to contain 4.87 grains of arsenic to the square foot. Emma was removed from the room and entirely recovered her health.

3. Last fall, the son, Herbert, was allowed to occupy the same room. In a short time all the distressing symptoms which had afflicted Emma were developed in Herbert. He was removed from the room and entirely recovered.

4. Mr. H. had his house papered with wall-paper which contained a considerable quantity of green. Soon after Mrs. H. and all the children passed into a condition of continued ill-health. The time of the commencement of this ill-health was so nearly identical in all the cases, and the symptoms were so similar, that Mr. H. was convinced that there was some common cause operating on his family to cause this mysterious sickness, but he was unable to find anything in the condition of his home or its surroundings which would explain it. While examining the report of the State Board of Health, his attention was called to poisonous wall-paper as a possible cause of ill health. The wall-paper in his rooms was analyzed, and found to contain 1.88 grains of arsenic to the square foot. It was at once removed, and Mrs. H. and the children recovered their usual good health.

These cases require no comment. But as *all green wall-papers do not contain arsenic*, it is well to menttion the ready method of distinguishing those that do. "The green arsenical colors are readily soluble in ammonia water. If a little ammonia water poured on the paper discharges the green color, or produces such a change in the color

as indicates the removal of green, the paper should be rejected, as it probably contains arsenic. To identify the presence of arsenic in any paper, wet the paper with ammonia water, pour off this water on a clean piece of glass, and drop into it a crystal of nitrate of silver, or a small piece of lunar caustic. If a yellow precipitate forms around the crystal, it indicates the presence of arsenic." L. S. J.—*Va. Med. Monthly.*

Is there Danger of "Driving in" a Skin Disease?—The popular opinion says there is. We have heard the venerable Prof. Geo. B. Wood sanction this opinion. Dr. McCall Anderson, in his late book on Skin Diseases, denies it, and scouts it. His reviewer, in the *Medical Press and Circular*, says:

"Eczema, known to have a constitutional origin, ought not to be suddenly cured. That eczema very often relieves the system by its appearance does not admit a doubt. In the young its sudden suppression has been followed by water on the brain, and here the disease had been confined to the head; and in after-life, when the gouty poison is so often mixed up with the eczema, we have known bad effects at once follow the disappearance of the rash. We have seen pemphigus make its appearance, and confined exclusively to the parts where the eczema had been. Violent cramps, too, are not uncommon under similar circumstances; and we have seen most obstinate cough and some forms of dyspepsia also come on. Every one, too, must have known bad effects follow the drying up of what seemed at the moment a very trivial discharge. This subject might be pursued very much further, but such is not called for here; and we would only add that on this point of the drying up or curing such a disease as eczema, too much caution cannot be exercised."

Here is an open question, and a very practical one, which should be discussed.—*Phil. Med. Reporter.*

Tannate of Quinine in Chronic Albuminuria.—Bouchardat (*L'Abeille Med.*, July 6) says: "I am in the habit of employing the sulphate of quinine in chronic albuminuria according to the method of Dr. Devouves, and occasionally with unhoped-for success. The dose I employ is eight grains in a cup of strong coffee three times a day. This is continued for six days, and at the end of that time scammony or some similar purgative is administered. After one or two days of rest, the patient is again placed on the use of quinine, and I have frequently continued this treatment for more than a year. The food of course should, during this treatment, be highly nutritious. Lately I have been substituting the tannate of quinine for the sulphate, in doses of ten to twenty grains, three times in twenty-four hours, given in a similar manner. The digestive apparatus supports the tannate better than the sulphate."—*Medical Times.*

Treatment of Whooping-Cough.—Wild claims that he can cure every case of whooping-cough within eight days by the following treatment: The patient is not to leave the room, and at every access of coughing is to hold before his mouth a small piece of cloth folded several times, and wet with a teaspoonful of the following solution: Ether, 60 parts; chloroform, 30 parts; turpentine, 1 part.—*Deutsches Archiv. f. Klin. Med. Allg. Wien. Med. Ztg.*, 45, 1874.

Formulæ for the Troublesome Cough of Phthisis:—

℞. Potassii bromidi,
Potassæ chloratis,
Ammoniæ muriatis, } aa ʒ iss.
Syrup. tolutani ℥iv. M.
Tablespoonful every two or three hours.

℞. Tincturæ opii camphoratæ, ℥ i.;
" belladonnæ, ʒ i.;
" hyoscyami, ʒ ij.;
Spiritus Lavendulæ comp., ℥ i. M.
Ten drops on a lump of loaf sugar every hour until cough is relieved.—*Charity Hospital, New York.*

ON A RATIONAL TREATMENT OF PULMONARY PHTHISIS.—In a note presented to the Paris Academy, M. Pietra Santa upholds the doctrine of curability of pulmonary phthisis, after combating the German theory of cellular proliferation, and the fatalism of Broussais' school. For him, pulmonary phthisis is essentially a general and constitutional affection, a profound alteration of the acts of nutrition, a malady of the blood. Therefore, there is no panacea for a malady (symptomated by enfeebled vitality), of which the several phases of evolution form as many distinct morbid entities. There can be no antidote for a morbid diathesis, pre-existent to local anatomical lesions which characterize the affection. The unique specific for pulmonary phthisis is an intelligent and rational association of that collection of medicaments of which experience and chemical observation have made known the efficacy. The matter may be included in these precepts:

1. To call to aid, during all periods of the malady, all hygienic resources —moral and hygienic treatment, pure and renewed air, tonic alimentary regimen, moderate exercise, lactic diet.

2. To utilize mineral waters—sulphuretted, arsenical, chlorides.

3. To call to assistance the salutary effects of change of place, sojourn in temperate climates in winter, in mountainous countries during summer.

4. To neutralize the morbid ferments that engender in the organism purulent absorption, and lead to establishment of tuberculous matter. This is effected by the administration of hyposulphites and of alkaline and terrous sulphates.

5. Never to neglect the numerous general therapeutic agents, when these tend to combat the complications inseparable from each period of the malady.—*London Med. Record*, Dec. 20, 1874.

A HEALTHY YEAR.—It appears from the address of the President of the American Public Health Association that the present has been an exceptionally healthy year. This is shown by the reports now coming in of the various countries of the civilized world. Not only has there not been a movement of the great epidemics, but the general death-rate has been much less than during the preceding year.

A HINT IN GIVING IODIDE OF POTASSIUM.—A useful hint is revived in the *British Medical Journal* by Mr. Joseph P. McSweeney. He says: "Sir James Paget was the first to call the attention of the medical profession to the following interesting fact —namely, that carbonate of ammonia greatly increases the therapeutic action of iodide of potassium. I have had extensive experience in the treatment of syphilis, and have tried it with the best results, and find that five grains of potassium, combined with three grains of carbonate of ammonia, are equal to eight grains of the potassium salt administered in the ordinary way."

THE French Academy of Sciences recently made its awards of prizes for the years 1872 and 1873, distributing a total amount of over $11,000, gold, among twenty or more successful competitors, in sums of from $100 to $2,000.

With the exception of three small prizes in the department of botany, the prizes given were for investigations and discoveries in medicine and surgery; while in a few instances, appropriations appear to have been made for reimbursement of expenses of competitors who failed to obtain prizes.

At a meeting of the Academy in January of the present year, the announcement was made of the receipt from the Minister of the Interior, of a sum of $800, half of which is to be awarded to the best treatise upon the hygiene of infant children; the remainder to be expended in the publication of the successful work, and in encouragement.

THE INFLUENCE OF OZONE.—As heretofore remarked in this journal, the influence of ozone on health is esteemed of less and less magnitude. In the last Health Report of the British Navy is a paper on the subject by Staff-surgeon J. Mulvany. In conclusion he expresses an opinion that no disease can be clearly traced either to the superabundance or scarcity of ozone. Also that its most marked influence appears to be exercised over the generative organs; and as it tends to increase the chances of fecundation, the probability is that it imparts to the primary elements of life an accession of developmental force, which counteracts the transmission by the parents of that impaired bodily vigor which is always induced by the condition of heat, humidity, and clouds, etc., under which the manifestations of ozone are most liberal. And in this way ozone may be looked on as an important agent in the prevention of the degeneration of the human race. This is certainly a curious, and if correct, a conclusion of no trifling value.—*Phil. Med. Reporter.*

KEEPING THE BED AFTER CONFINEMENT.—Dr. William Goodell, of Philadelphia, in his account of the arrangement of lying-in women in the Preston Retreat, writes as follows in regard to the common practice of keeping the bed:

Lying-in women are encouraged to get up for food when they feel so disposed, because there are, to my mind, strong objections to the rigorous maintenance of the recumbent posture. Labor is, in general, a strictly physiological process, and there can be no sound reason why it should be made to wear the livery of disease. Nature teaches this very plainly, for most women wish to get up long before their physicians are willing to let them. The fact of a woman's wishing to get up is, to me, a very good reason why she should get up. In the second place, few physicians will deny that nothing so relaxes the tone of muscular fibre as a close confinement in bed. In my experience, a woman ordinarily feels stronger on the fifth day than she does on the ninth, if rigorously kept under quilts and blankets. Once more: the upright position not only excites the womb to contract, but, by distributing the blood and equalizing the circulation, it actually lessens the amount of the lochia and shortens their duration. On the other hand, the dorsal decubitus keeps up a passive congestion of the womb as a whole, the engorgement of the greatly hypertrophied placental site, and a blood-stasis in the now thickened posterior wall—all important factors in hindering the process of involution. Again: uterine diseases are hardly known among those nations whose women early leave their beds. From passages in the writings of the classics, it is evident that among the ancient Greeks and Romans, those models of physical strength and beauty, the women arose, and even bathed in a running stream, very shortly after delivery—in some cases on the very day. Finally, what is sounder than all theory, a sufficiently long and well-sifted experience has proved to me that by such a treatment convalescence is rendered far more prompt and sure. At this result, very unexpected to the multiparous patients of the Retreat, they are constantly expressing their surprise.—*Pacific Med. and Surg. Journal.*

TOO GOOD TO BE TRUE.—M. Paraf has discovered a way of doing without rain, if necessary. He knew that the air is full of moisture, and he knew that chloride of calcium would attract and condense it, for cultural purposes. He has applied this chloride on sand-hills and roadbeds, on grass, on all sorts of soils, successfully, and he has ascertained that it may be applied in such proportions as will produce the irrigation of land more cheaply and efficiently than by means of canals or other methods of securing artificial irrigation.—*Boston Journal of Chemistry.*

NEW ANTISEPTIC OINTMENT. — Prof. Lister, according to the *Student's Journal and Hospital Gazette*, is at present using, with great success, an ointment composed of paraffin, 2 parts; white wax, 1 part; sweet oil of almonds, 2 parts; and boracic acid (powdered), 1 part. — *Medical and Surgical Reporter.*

TREATMENT OF PILES AND PROLAPSUS OF THE RECTUM BY INJECTION INTO THE RECTUM OF EXTRACT OF ERGOT.—Dr. G. William Semple, of Hampton, Va., reports (*Virginia Med. Monthly*) the case of R. M. B., whom he operated upon for piles in 1868 with the ecraseur. "The disease began to return in eighteen months, and increased to such an extent, accompanied by prolapsus of the rectum, that for three years there had been a considerable loss of blood every day, and it had been necessary that he should lie down after each evacuation of the bowels to await the return of the prolapsed rectum, when, on the 8th of April last, I operated on him by the application of nitric acid. This, contrary to my usual experience, produced violent pain and irritation of the neck of the bladder, requiring for three days large and repeated doses of morphia.

"After healing of the slough, the piles still continued to bleed and to be painful, but the patient was unwilling to submit to further operative procedure. Having, at the same time under successful treatment, by ergot, a mammary tumor, and my attention having been called to the relief of varicose veins by the hypodermic injection of ergotin, and remembering that in several cases of imperfect involution of the uterus, in which I had successfully prescribed ergot in combination with sulphates of quinia, iron and strychnia, and extract of cannabis indica, in which piles coexisted, they also had been cured, I ordered the injection of ℥ ss. of the fluid extract of ergot, with ℥ ss. of water, into the rectum after each evacuation. Though the patient has been irregular in pursuing the treatment, he has since seldom had any discharge of blood or suffered any inconvenience, and now considers himself cured.

"On the same day (May 1) this prescription was made, B. H. L., convalescent from typho-malarial fever, who had suffered with piles and prolapsus of the rectum for fifteen years, daily losing blood, and being obliged to lie down after every evacuation to await the return of the prolapsed part before resuming his work, called on me for advice. Ordered the same treatment, which he pursued steadily. At the end of six weeks, having had but one discharge of blood, he felt himself well, saying he was a new man.

"This patient's spleen had been greatly enlarged for many years, and that, much to my surprise, was reduced to its normal size by the treatment.

"I have since prescribed the same treatment in three other cases of piles, all of which have been cured. One of the patients was a pregnant woman. No labor-pains were produced, or inconvenience felt."

DIGITALIS. — M. Gaunot, in the course of a paper published in the *Gazette Medicale de Paris*, on the action of digitalis, says: "When digitalis or digitalin is administered for some time to a man in full possession of sexual powers, these become gradually weakened, the propensities disappear, formation of the liquor seminis diminishes, and may at last cease altogether. The anaphrodisiac properties of the drug are the secret of its good effect in spermatorrhœa."

Dr. Little recommends the use of digitalis in febrile cases in which stimulants are either not well borne or are contra-indicated, as where renal affection is present. He has given half-drachm doses of the tincture every three or four hours in typhus, enteric and rheumatic fevers, with very favorable results. — *Edinburgh Medical Journal.*

PUERPERAL FEVER. — In the address in obstetrics, delivered at the last annual meeting of the British Medical Association,* Dr. J. Matthews Duncan stated that it was his belief, that nearly one in every one hundred women, delivered in Great Britain at or near the full time, died in parturition, or before the puerperal state and its effects had passed away. In addition to this startling mortality, parturition brings with it a vast amount of disease and suffering which does not end fatally. By far the largest number of deaths are due to puerperal pyæmia, a term which Dr. Duncan would substitute for the erroneous one of puerperal fever, since there is nothing essentially puerperal known in it, nor anything of the nature of a fever as that term is generally understood. All evidence brings the disease into the closest alliance or identity with surgical pyæmia. It is a disease always present; but never has it been shown to possess an epidemic character. It varies in its ravages just as pneumonia does, but in a very different manner from what is found to be the case with cholera or scarlatina. The puerperal woman presents a most favorable nidus for the reception of morbific material in her contused and lacerated passages, and patients suffering from puerperal pyæmia, or any allied diseases, offer this morbific material in its most potent essence. No other well demonstrated communicability has ever been proven, as tending to show that this disease is either contagious or infectious. The same laws of pathology govern lying-in hospitals as govern all hospitals, and it is absurd to claim that any greater danger exists for patients in one than for those in the other. Beyond question, pyæmia is a septic disease, and puerperal pyæmia may be almost if not altogether prevented by the application to delivery of a practice based on antiseptic principles.

In a carefully prepared treatise on Erysipelas and Puerperal Fever, recently published, the author, Dr. Thomas C. Minor, gives in detail an account of both diseases as they prevailed sporadically in the United States during the year 1870, and also the history of a puerperal fever epidemic observed in the southwestern part of Ohio in the winter of 1872. The facts, as given by Dr. Minor, appear to establish the fact that erysipelas and puerperal fever seem to prevail together throughout the United States, and that any marked increase of one disease in any particular locality, is always followed by a corresponding increase of the other. Infants die of erysipelas shortly after or before their mothers die of puerperal disease.

M. Chauffard * considers that any disease which produces morbid discharges may give rise, in women recently confined, to puerperal fever. During his service at the Neckar Hospital, he has frequently remarked that the opening of an abscess, or the presence in the wards of purulent ophthalmia or erysipelas, is sure to be followed in a short time by puerperal troubles of greater or less severity.— *Boston Med. and Surg. Journal.*

ENLARGEMENT OF THE TONSILS AS A CAUSE OF NIGHTMARE.—J. Warrington Haward, F. R. C. S., relates some cases of nightmare occurring in children, resisting ordinary methods of treatment, and increasing in frequency and severity, which were at once permanently cured by the removal of a portion of the tonsils. As these glands were enlarged, he was led to believe that the obstruction to respiration and consequent cerebral congestion were sufficient to produce the disorder. Nightmare due to gastric irritation or dentition occurs, as a rule, only once in the night, while that due to enlarged tonsils often recurs several times in the same night, and is invariably observed to be aggravated by the child catching cold.— *British Medical Journal.*

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* *Obstetrical Journal of Great Britain*, Sept., 1874.

* *Gazette Hebdomadaire*, October 16, 1874.

THE TENSILE STRENGTH OF THE FŒTUS.—Dr. J. Matthews Duncan reports* a series of experiments undertaken to ascertain the amount of force which can safely be applied in effecting the delivery of a child. The body of a new-born baby was passed through an aperture so cut in hard wood as to represent the brim of a contracted pelvis. Above the ankle, an apparatus was applied by which weights could be suspended. The amount of the weights used was to be gradually increased until the body of the child was dissevered. In order to bring the experiment into conditions analogous with those of labor, the weights were allowed to operate for only half a minute at a time. In each experiment the separation took place at the neck. The decapitating force varied from ninety-one to one hundred and forty-one pounds, giving, therefore, an average of about one hundred and twenty pounds.

The life of the child is, of course, compromised before the limit of the tensile strength of the fœtus is reached, since the destruction of the spinal column occurs under the application of a force considerably less than is required to produce decapitation.

In these experiments it was found that the cervical part of the vertebral column first gave way, allowing the dissevered vertebræ to become widely separated before actual decapitation took place. While one hundred and five pounds sufficed to separate the cervical vertebræ, an addition of fifteen pounds was required to decapitate. In all cases the vertebral column yielded with a jerk, followed by a marked elongation of the fœtal body. This fact is, therefore, one of great importance to the accoucheur if he wishes to avoid decapitation. It was further found that a single limb, so far as strengh was concerned, sufficed to effect decapitation by traction.

These experiments are of great value as regards the force that may safely be employed in podalic extraction; but it was found a far more difficult problem to ascertain the power that may safely be applied in extracting a child with the forceps. In this latter case, a far greater force can be exerted than in the former. It has been proven that it is possible to apply the forceps to a fœtal head at the brim of an actual pelvis, so as to defy the utmost efforts of the most powerful accoucheur. The fœtal head is firm enough to resist a dragging force far greater than can be used in podalic extraction.—*Boston Med. and Surg. Jour.*

* *British Medical Journal*, December 19, 1874.

IN cases of dropsy of the joints, especially that of the knee, Dr. Bergeret finds the continued application of bags of hot sand to answer better than any other kind of treatment. When the acute stage is passed, and whatever may be the cause of the dropsy, he wraps the joint in a thick layer of cotton-wool, and applies to this a sack containing two or three litres of fine and very hot sand. The dropsy disappears in a few days. The sand must be very hot, and the heat may be kept up by means of covering with a blanket. The sand must not be too thick in the bag, so that it may extend easily on the knee, and overhang the hydrarthrosis in every direction.—*Boston Medical and Surgical Journal.*

DIPHTHERIA.—Dr. J. Lewis Smith, (*N. Y. Medical Record*) says: The local treatment consists in the application to the fauces, every three hours, of the following, which has given me better satisfaction than any other medicine for local treatment which I have employed: ℞. Acidi carbolici, gtts. v.; liq. ferri subsulphat, ʒ ij.; glycerin, ʒ i. M. The brush was employed in preference to the probang, as it is less painful, and where there is a pseudo-membrane does not produce hæmorrhage by its detachment.

INCISION OF THE CERVIX UTERI.—Prof. R. Olshausen * divides dysmenorrhœa into three varieties, according as its origin may be considered obstructive, congestive, or ovarian. Incision of the cervix uteri is to be used only in that class of cases, small in number, where the dysmenorrhœa is dependent upon the small size of the external os. In cases where either the internal os or the cervical canal is found to be narrowed by some lesion of the lining mucous membrane, the cervix uteri should never be incised. In all cases where the sound enters the uterine cavity suddenly, as if passing some contracted spot, whether that contraction be owing to disease, or is the normal condition of things, an incision should be made. Wherever sterility is found to exist with mechanical dysmenorrhœa, there is always a pathological contraction of the external os. In those cases in which we are attempting the removal of sterility, the external os may be incised, even though it appear to be normal. It is a well-known fact that the dilatation of the os, as occurs in labor, is favorable to a subsequent conception, since many women, who have been sterile for a long time, gave birth to a number of children rapidly after the birth of the first child.

The best instrument to be used in performing incision is Sims' blunt-pointed bistoury. The blade should in all cases be passed as high up as it is desirable to make the incision, and the cut should be made from above downwards. The instrument should then be withdrawn, and the opposite side cut in the same manner. It is very important that the external os should be so deeply cut as to leave an open slit. The lips are then to be kept apart by tearing any adhesions which may form every twenty-four or forty-eight hours, and a solution of the perchloride of iron should be subsequently applied. Sponge tents should never be used, since they are liable to produce septicæmia. The operation should never be performed if there is any inflammatory process going on in the neighborhood of the uterus.

In those cases where there is anteflexion of the uterus, accompanied by sterility, a good result seldom follows the ordinary lateral incisions. In these cases, a wedge-shaped piece should be cut out of the anterior lip. The bilateral incision of the os uteri is recommended in all severe cases of uterine catarrh, since internal medication of the uterine cavity is then rendered more easy of application.

The operation of incision is one worthy of the most careful study, and requires the greatest care in the performance of it, as well as in the after-treatment of the patient.—*Boston Med. and Surg. Journal.*

* *Volkmann's Sammlung klin. Vortrage*, 67, 1874.

CARBOLIC ACID IN TAPEWORM.—Dr. S. A. Brown, U. S. N., writes to the New York *Medical Record:* In a recent issue of your journal I noticed a letter from Dr. Bills, of the army, recommending the use of carbolic acid in the treatment of tapeworm.

Having a case on hand at the time which had resisted the use of oil of turpentine and pepo for a month or six weeks, I immediately administered to him the following prescription: ℞. Acid carbolic cryst., gr. ij.; glycer. pulv. gr. iv. Ft. pil., No. 2. To be taken every three hours, beginning at 9 a. m. and continued until 9 p. m. This followed in the morning by jalap and rhubarb, ten grains each. On the first day a few joints were passed; on the second a great number, and on the third the head and narrow portion came away, with a great number of small sections, from one to three inches long. On the fourth day, treatment being kept up without further result, the medicine was discontinued. The only sensation created in the stomach by the administration of such large quantities of the drug was a slight burning, not sufficient to inconvenience the patient. I look upon this as a perfect cure, and therefore report the case to you.

HÆMORRHOIDS.—Dr. Wm. Colles, Dublin, lately injected twenty minims of tincture of perchloride of iron into each internal hæmorrhoidal tumor. No traces could be found some weeks afterward, by speculum, except nodules, of the size of a shrivelled currant. The case had resisted Dr. Houston's application of fuming nitric acid.—*British Medical Journal*, June 27, 1874, p. 849.

RESEMBLANCE OF TWINS. — Dr. Bird declares that, according to his own experience during thirty years, twins which are contained in the same membranes, and have a single placenta, resemble each other; while those which are contained in separate membranes, and have different placentæ, do not resemble each other more than other children of the same parents.—*La Tribune Medicale.*

ASPIRATION IN PLEURISY. — The question as to the use of the pneumatic aspirator in pleurisy has of late been discussed by Dr. Becker, of Munich. In cases where the operation is one of necessity for the preservation of life, there can, of course, be no question as to its propriety; but in most cases of pleurisy with serofibrinous effusion, Dr. Becker is decidedly opposed to aspiration of the fluid. Exen where the pleural cavity is so full that the heart is much displaced, as long as the respiration and circulation are not disturbed, he would leave the cure to nature. He contends that when the fluid has reached a certain amount, effusion ceases, and the current setting in an opposite direction towards the vessels, the cavity is gradually emptied, and contraction and adhesion occur in due order. Nature spontaneously limits the amount of effusion by compressing the root of the collapsed lung, and thus so far arresting the circulation in the vessels of supply. If the physician interferes with this normal course of affairs, and removes the fluid before the pressure in the pleural cavity has reached a certain height, he will simply restore the circulation in the pulmonary vessels, reestablish the conditions of effusion bring the rough surfaces of the pleura into frictional contact, and have robbed the system of so much precious fluid.

Dr. Becker considers the circumstances even more serious when the collapsed lung is adherent. Should aspiration then be performed, the fluid speedily refuses to flow, the tube collapses, and air forces its way around the needle into the chest. Worse still, the lung expanding unequally may undergo alveolar dilatation; it becomes hyperæmic, hæmoptysis may occur at once, and bronchitis and pneumonia supervene. Less serious reasons for letting nature alone in sero-fibrinous pleurisy without urgent symptoms are the facts that the risk of sudden death from fatty heart, which is present in such cases, is not removed by operation; that marasmus is not relieved by it; and that fresh pleurisy often comes on, and the chances of empyæma increase with every tapping.—*Boston Med. and Surg. Jour.*

ETHER FOR TAPE-WORMS.—When the anæsthetic power of ether was first discovered, it was only proposed to use it on human beings to render surgical operations painless. Von Heyden, the merciful man who would not inflict pain on any living creature, employed it as long ago as 1830 for killing insects for his collection. Even worms are rendered dormant and helpless by its use. Prof. August Vegel now announces a new application of this anæsthesia for worms —its application to tape-worms. The ether is enclosed in a gelatin capsule and swallowed. The ether is vaporized in the stomach, and the worm stupefied, it being then easily removed by any of the usual remedies, against which when awake, the worm offers a strong resistance.

THE VALUE OF QUINIA IN ACCELERATING PARTURITION.—Dr. O. B. Stafford, of New Boston, Ill., reports (*N. Y. Med. Jour.*, Feb. 1875,) several cases illustrating the value of quinia in accelerating parturition. In his first case his patient had been in labor for twenty-four hours, but for two hours previous to his seeing her, had been without any pain whatever. Found a well-dilated bag of waters presenting properly, but everything pertaining to active labor positively quiet. He gave her eight grains of sulphate of quinia at one dose, and in twenty minutes strong expulsive labor-pains set in, and in one hour labor was terminated.

In another case the patient had been in labor about eighteen hours, but aside from presentation of bag of waters and dilatation of os uteri to the size of a shilling, no progress had been made. After waiting two hours, and finding that manipulation about the os failed to produce any uterine contraction, Dr. Stafford gave her about seven grains of quinia. In thirty minutes, patient complained of strong bearing-down pain. Uterine walls hardened, dilatation was completed, and in one hour and a half delivery was completed.

One very remarkable feature Dr. Stafford finds, presents itself in the administration of quinia in obstetrical cases. It does not produce that *spasmodic* uterine contraction, which in his hands at least, so frequently follows the giving of ergot; also an unusual freedom from flooding; the entire placental mass is dislodged with but little difficulty, the uterus contracts firmly, presenting that hard, woody feeling which is so pleasing to the careful obstetrician.

In all his cases, the mothers convalesced well. General nervous prostration did not ensue to so great an extent as we frequently observe. Lochial discharges were normal, and there was a marked freeness from malarial difficulties, puerperal fever, chills, etc., which are so prevalent in the Mississippi Valley.

EXTERNAL USE OF TURPENTINE IN THE TREATMENT OF TONSILITIS.—In the *Leavenworth Medical Herald* Dr. S. H. Roberts strongly recommends the use of turpentine externally in tonsilitis. He folds the flannel to four thicknesses, wrings it out in hot water, and pours oil turpentine over a spot the size of a silver dollar. The flannel is then applied over the sub-parotid region, and the fomentation continued as long as it can be borne. After removal a dry flannel is applied, and the same region rubbed with turpentine every two hours. This application is continued daily till resolution occurs. The doctor believes, from the evidence of his long experience, that thus applied early in the disease, the oil of turpentine has almost a specific effect in tonsilitis. That its action is not simply that of an irritant, he has proved by employing mustard, croton oil, tr. iodine, etc., in the same class of cases. They always failed to diminish the inflammation of tonsils, while the turpentine succeeded.—*Detroit Review of Med.*

A SIMPLE METHOD OF REDUCING THE DISLOCATION OF THE FOREARM BACKWARDS.—Dr. Alexander Murray writes to the *New York Medical Record* of July 1, 1874, that he has reduced five cases of the above-mentioned dislocation by the method to be described.

Supposing the dislocated arm to be the left. Dr. Murray takes his position at the outside of the dislocated arm, and places the palm of his right hand to the patient's left, dove-tailing his fingers between each of the patient's. In this way, a firm hold is secured for extension. He then places his elbow as a fulcrum and for counter-extension on the forearm in front and against the lower end of the humerus, and by a steady pressure downward and backward, and at the same time flexing the forearm toward the shoulder, in a few minutes the luxated bones slip into their natural places. Other dislocations of the elbow can be reduced by the same method.

Book Reviews.

PULMONARY TUBERCULOSIS—ITS PATHOLOGY, NATURE, SYMPTOMS, DIAGNOSIS, ETC. By Addison P. Dutcher, M.D. Philadelphia: J. B. Lippincott & Co. For sale by Keen, Cooke & Co., Chicago.

This is a volume of 380 pages, and forms a very complete, comprehensive and practical treatise on the subject of pulmonary tuberculosis. The author does not put forward any especially new theories regarding either the pathology or treatment of the disease, but gives a fair, clear statement of all the recognized doctrines, and of the latest studies and investigations of the subject.

In considering the nature of pulmonary tuberculosis, the various theories are briefly reviewed under the headings of inflammatory, imperfect nutrition, defective respiration, specific morbid condition of the blood, imperfect innervation, and retrograde metamorphosis of the tissues. In summing up his own conclusions, the author says: "From a careful review of the whole subject, we think we are fully warranted in drawing the following conclusions:

1st. "That pulmonary tuberculosis is a specific disease, depending upon a morbid condition of the blood, which leads to a discharge of some of its depraved constituents on the external surface of the air cells, and under the basement membrane.

2d. "That this morbid matter is not capable of being assimilated into their textures, nor in any way contributing to their growth or maintenance, and ultimately leads to their dissolution and all its attendant phenomena.

3d. "That the tubercular diathesis increases, and is attended with cachexia, which is often disproportionate to the local disorder, thus early proving its specific and constitutional origin. Tubercular disease may, however, sometimes, cease in part; yet, if we look to its fearful mortality as an index of its natural course, we may see in it a law of increase like that exemplified in some of the more malignant disorders, such as cancer. And such a law is not exemplified in ordinary local diseases, for they generally tend to subside with the lapse of time."

These conclusions are fairly stated, and embody, we think, the now most generally recognized doctrine of the nature of tubercular disease.

In succeeding chapters, the condition of the blood and of the various organs in pulmonary tuberculosis, and the general symptoms, physical diagnosis, etc., of the disease are considered.

Among the physical signs, the author gives more prominence than most writers on the subject, to the dark red or purplish margin along the edge of the gums, which is denominated Thompson's gingival margin. This he considers one of the earliest, most constant, and positive evidences of the tubercular diathesis. He considers it of especial value as one of the few signs diagnostic of the early or pre-tubercular stage of the disease; where, if recognized, it is comparatively manageable and amenable to treatment.

The various symptoms and complications which are common to the different stages of pulmonary tuberculosis, are discussed under appropriate headings. Numerous cases from the author's abundant experience, illustrative of peculiarities in pathology, diagnosis or treatment, are also interspersed throughout the work.

The causes of phthisis, are discussed under two heads: the hereditary and the accidental. Among the latter, variations of temperature, imperfect nutrition, depressing and exciting passions, intemperance, etc. are classed as the most prominent. The possibility of transmission by inoculation or contagion, is also briefly considered. Several chapters are devoted to food, clothing, exercise, and various hygienic regulations for the preservation and restoration of health of consumptives, with a last closing chapter on alcoholic stimulants. The chemical nature and the physiological action of alcohol are considered, and the theories of those who advocate their use in pulmonary tuberculosis are fairly stated. The author gives the weight of his influence and opinion with that of many other careful observers, as opposed to their use, and denying entirely their value or efficiency, in either arresting or retarding the progress of pulmonary tuberculosis.

There is running through the work a vein of sentiment and religious fervor, breaking forth occasionally into poetical rhapsody—passages, beautiful, eloquent and appropriate in themselves, judged from a literary standpoint, but which strike one as a little odd or misplaced in a plain, matter-of-fact, scientific treatise.

As a whole, however, we heartily and conscientiously endorse each and all of the views and opinions advanced by the author.

F. H. D.

THE DISEASES OF THE STOMACH. By Wilson Fox, M.D., etc. Philadelphia: H. C. Lea. 8vo.; 280 pp.

This, under a new title, is really a third revised and enlarged edition of the author's little treatise on the diagnosis and treatment of the varieties of dyspepsia. The present edition is much more complete and comprehensive in its scope and character, including all the diseases of the stomach.

The author's name and reputation as a writer and authority upon this subject, renders superfluous an extended comment upon the excellence of the work.

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS. Delivered at University College Hospital, by Sir Henry Thompson. Philadelphia: H. C. Lea. For sale by Jansen, McClurg & Co., Chicago. 8vo; 200 pp. Price $2.25.

This is the second American, reprinted from the third London edition of this little work. The author's aim, he states, has been to produce in the smallest possible compass, an epitome of practical knowledge concerning the nature and treatment of diseases of the urinary organs. That this aim of the author has been accomplished, is sufficiently proven by the abundant success of the former editions.

DENTAL PATHOLOGY AND SURGERY. By S. J. A. Salter, M.D. New York: Wm. Wood & Co. 8vo; 400 pp.

This seems to be a very complete and comprehensive treatise on dental pathology and surgery. The author

has devoted himself exclusively for the past twenty-three years to the practice of dental surgery, and as dental surgeon to Guy's Hospital, has had abundant field for study and experience in this special department. The work is well and numerously illustrated. Covering, as it does, a special field which is but imperfectly elaborated in the works on general surgery, the surgeon will find it a valuable and useful addition to his library.

A SERIES OF AMERICAN CLINICAL LECTURES, Edited by E. C. Seguin, M.D. Vol. I, No. 1. ON DISEASE OF THE HIP JOINT, by Lewis A. Sagre, M.D. New York: G. P. Putnam's Sons. For sale by Keen, Cooke & Co., Chicago. 24 pp. Price 40c.

This is the first issue of the proposed series of American Clinical Lectures. The numbers, for the present, are to be issued monthly, and sold separately, at from thirty to fifty cents each. The contributors to succeeding numbers, so far as announced, are Prof. Austin Flint, Sr., Prof. A. L. Loomis, Prof. A. Jacobi, Prof. T. G. Thomas, Prof. W. H. Thompson, Prof. H. R. Sands, and Prof. W. H. Draper, all of New York.

PAMPHLETS RECEIVED.

MIGRANTS AND SAILORS, Considered in Their Relations to the Public Health, by John M. Woodworth, M.D. and Heber Smith, M.D. Riverside Press, Cambridge. A Reprint from Proceedings of American Public Health Association.

PHYSICIAN'S POCKET CASE-RECORD AND PRESCRIPTION BLANK BOOK, WITH VISITING LIST. Cincinnati: Case Record Company. 35c. each; $3.50 per dozen. A larger office edition similarly arranged, but without the Visiting List, $1.50 each. For sale by Keen, Cooke & Co., Chicago.

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SCLERITIS SYPHILITICA; Its Pathology, Course and Treatment. By Fred. R. Sturges, M.D. New York: G. P. Putnam's Sons.

THE RELATIONS OF THE NERVOUS SYSTEM TO DISEASES OF THE SKIN, by L. Duncan Buckley, M.D. New York: G. P. Putnam's Sons.

A RETROSPECT OF THE STRUGGLES AND TRIUMPH OF OVARIOTOMY IN PHILADELPHIA. Annual Address Before the Philadelphia County Medical Society, by Wash. R. Atlee, M.D. Thos. Collins, 705 Jayne Street

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Original Communications.

EXTRACTS FROM AN INAUGURAL THESIS ON YELLOW FEVER.

BY W. H. H. HUTTON, M. D., CHICAGO MEDICAL COLLEGE, 1875.

YELLOW fever is peculiar, in that it is confined to certain circumscribed geographical limits, namely: Upon land bordering upon the Atlantic Ocean, or rivers and estuaries emptying into it. While the tropical or semi-tropical regions of this division of the globe is its usual habitat, yet it has been carried and propagated as far north as Philadelphia, New York and Boston, 40°–41° N., St. Nazaire, France, 47° N., and Plymouth and Southampton, England, 50°–51° N.; as far South as Montevideo, 35° S., and is quite frequent in Rio Janeiro.

It seems, however, to occur endemically only in the West Indies, shores of the Caribbean Sea, and the eastern coast of Central America and Mexico. When it appears beyond these limits, it is not generated *de novo*, but its germs have been transported thither from those regions where it is endemic.

While within these limits, it is usually confined to cities, towns, and camps located upon the low alluvial shores of the sea, or rivers emptying into it, it sometimes penetrates far inland, as in Memphis and Shreveport, in 1873, where it manifested all its malignancy and fatality. Again, it mounts high above the sea on rocky heights, to which malaria rarely or never ascends, as at Gibraltar, 1,400 feet above the sea; Stony Point and Newcastle, Jamaica, 2,500 and 4,000 feet above the sea. It is unknown upon the western coast of North and South America, Australia, East Indies; or, in fact, any part of Asia, eastern coast of Africa, and only the Atlantic ports of Europe, especially those of Portugal and Spain.

As to its origin or cause, I believe

it to depend upon the presence of animalcular germs; that these germs depend for their sustenance and propagation upon accumulations of animal matter—probably, a certain degree of heat and moisture; and, entering the human system, are capable there of propagating and multiplying, and of producing the morbid effects known as yellow fever.

A peculiarity in this disease is, that it produces its greatest effects in those of a phlegmatic temperament. By this, I mean those of a full habit, whose powers of assimilation are greater than those of elimination, and consequent accumulation of a superabundance of adipose tissue. When it attacks one of this class, his chances of recovery are small compared to those of a bilious temperament, whose powers of elimination are as great or greater than those of assimilation. Probably, upon this fact, we can account for the greater fatality also, of the disease among those who habitually indulge in alcoholic liquors, as we know the tendency of alcohol, in any of its forms, is to interfere with the process of metamorphosis and elimination, and increasing that of assimilation, as is noticeable in our habitual beer-drinkers. At any rate, whether the superabundant adipose tissue plays any important part in the sustenance and multiplication of these germs, is not for me to say, but the fact remains, that this class of individuals are especially obnoxious to the disease.

In regard to the geographical limitation of this species of animal life, we know that certain orders and species have their habitat in certain divisions of the world, and the *fiat* which has set the bounds of many known forms of animal life, beyond which they cannot live and thrive naturally, may certainly, also, have circumscribed the domain of this unknown animalcule.

That yellow fever is not referable in every instance to local malarial causes, or more nearly allied to the malarial than the continued fevers, is shown by the fact that it is not dependent upon the malaria engendered by vegetable decomposition, for its existence and propagation; that the two hardly ever co-exist; that while yellow fever seeks cities, towns, and camps where people are aggregated together, and the consequent accumulation of animal matter, malarial fevers seek the open country, where rank vegetation thrives, and stagnant waters abound; and amidst the greatest exhalations of miasm, yellow fever rarely appears. That, while yellow fever manifests itself only within a limited zone, malarial fevers are coextensive with the world—in the jungles of the East Indies, wilds of Africa, the Pontine marshes, and the swamps of our own country, where it often takes on as fatal effects as the more dreaded yellow fever.

Again, malarial fever, even in its most severe forms, does not tend to produce that condition of the system which secures an immunity from subsequent attacks. On the other hand, yellow fever rarely or never attacks the same person the second time. In these two respects, then—dependence upon the accumulation of animal matter for its existence and propagation, and the faculty of exhausting the susceptibility of the individual in a single manifestation—it certainly appears more nearly allied to the *con-*

tinued than the malarial, or periodical fevers.

That it is also *contagious*, I will endeavor to show, after I have related what I personally know about it in that respect.

I come now to examine the discrepancies on these points by medical writers and teachers; some maintaining its non-contagious remittent type, others its contagious continued character; some affirming that long-continued high temperature, 82° F. for two or more months, is a necessary element; others doubting it, and so on.

Both are right—that is, they have all observed these conditions in connection with a disease they have all designated as yellow fever.

Until the researches of Louis and Jenner established the contrary, typhus and typhoid fever were supposed to be one, and the same pathological condition of the system, or modification of the same; so, with what has heretofore been known as yellow fever, and recognized under different forms of manifestation, symptoms, progress, pathological lesions and conditions, is now coming to be recognized and separated into two distinct diseases, arising from different causes, with some symptoms and pathology in common, and others of a distinctive character, namely: *specific yellow fever*, and *yellow* remittent, or hæmorrhagic malarial fever.

In both, we may have yellowness of skin, intense headache, delirium, and black vomit, but here the analogy ceases. In yellow remittent fever, the pulse is uniformly rapid, 110–130 during the pyrexia; the delirium is more common and greater; the characteristic pain in the lumbar region is slight or wanting; the urine is not albuminous; there is no tendency towards suppression; and this form of fever is observed occasionally, in all parts of the world where malaria abounds in its most concentrated form.

While ordinary ague results from a mild, diffusible form of malaria, remittent fever and congestive fever are caused by a more concentrated form of the same *materies morbi;* and yellow remittent fever, requires in addition to this for its generation, long-continued high temperature, and probably, a peculiar state of the surrounding atmosphere.

On the other hand, in specific yellow fever, after the premonitory symptoms, the pulse is remarkably slow; sometimes of a "hobbling" character; the pain in the lumbar region is excruciating, resembling that of a severe sprain or contusion; the delirium is slight, if any, in most cases (indeed, I have known of fatal cases in which the patient was perfectly conscious until the last moment); the urine is albuminous; there is always marked diminution, and a tendency toward suppression; suppression being a *fatal pathognomonic symptom*, much more so than that of black vomit.

In yellow remittent fever, after the febrile symptoms have obtained from twelve to seventy-two hours, a remission occurs, which, unless convalescence is established, as is sometimes the case, continues for several hours, when all the symptoms return in an aggravated form, during which black vomit is apt to supervene, and, if death does not follow, convalescence is slowly established, or it may assume a typhous form with slow lingering recovery, or death from exhaustion.

On the other hand, specific yellow fever runs its course in from three to eight days, and either kills the patient or ends in almost complete recovery, in an incredibly short space of time. Sometimes, within a few hours after the febrile symptoms have passed away, the patient with undiminished muscular strength, and a voracious appetite, insists upon leaving his bed and going about his business. This, however, should never be permitted, as the overwhelming influences to which the system has been subjected, leaves it in such condition, although not recognized by the patient, that any indiscretion in regard to diet and muscular effort during a few days after convalescence is established, will almost surely result in a relapse and death. Therefore, he should be kept quiet for a few days, and gradually accustom himself to ordinary diet.

During the fall and winter of 1868-9, I was in Montgomery, Alabama, and an epidemic of fever, of a severe and fatal character, occurred there, with yellowness of skin and black vomit, and death in a large percentage of cases. But the fact of its occurrence late in the season, after frost had fallen several times, together with the fact that it could not be traced to other than local causes, led the profession to pronounce it yellow remittent, or hæmorrhagic malarial fever.

I may be permitted to say here, what I ought to have said before, that in specific yellow fever, the occurrence of white frost invariably puts an end to it, at least in its epidemic form; and no one who has not witnessed it, can imagine the joy which lights up the countenances of a people afflicted with this scourge, when, on rising some cold, clear morning, they see a white mantle spread abroad on the housetops and earth. Instantly, the event long and anxiously looked, hoped, and prayed for, is dispatched to those who have fled at its approach, and they return with feelings of safety to their abandoned homes. Cold is destructive to the germs of yellow fever, and only those will suffer thereafter during that season, who have already been contaminated, or who may enter dwellings where the germs may have been developed, and may not have been subjected to such a degree of cold as to destroy them.

I come now to relate my personal experience with yellow fever, and I believe I am right when I say that the experience and observation of interested individuals, are worth more to the science of medicine than all the fine-spun theories ever elaborated from the brain of the enthusiast.

In 1867, I was stationed at Fort Gaines, on Dauphin Island, 33 miles south of Mobile. The island is from one-fourth to one mile wide, and about fifteen miles long. It is low, flat, and covered with rank vegetation and swamps. In the summer and fall months, the exhalations from these marshes, especially about sunset, is so great as to be almost unbearable; so much so, that many times we were obliged to close our doors and windows. The consequences were, that we suffered severely from malarial fevers, some of them of the most obstinate character. From ten per cent. to forty per cent. of the garrison, were constantly under its influence.

On the opposite side of the bay, about three miles south-east, was Fort Morgan, situated on Mobile Point, a long sandy ridge projecting out across the bay from the east. Ma-

larial influences here were slight, and the garrison at Fort Morgan suffered but little from periodical fevers. The garrison at Fort Morgan consisted of one company, and at Fort Gaines, of two companies, of the 15th U. S. Infantry.

On the 13th of August, an officer of the U. S. Engineer Corps returned to Fort Morgan from New Orleans, where yellow fever was then prevalent, and in a few days was taken sick and died with black vomit. On the 27th, the commanding officer and commissary sergeant, who had attended the engineer officer, were taken, and on the 30th, died. Two other officers were sent down from Mobile, together with the best medical skill, yet within a week, fifteen of the forty odd men, and three of the officers were either dead or had it, every one of whom died except the hospital steward; he was saved by heroic doses of quinia, thirty grains every three or four hours. At this juncture, the remnant of the garrison evacuated the fort, and moved out to "Navy Cove," three or four miles from the fort. No new cases were developed after the removal of the command.

At our fort we had established a strict military quarantine, disinfected all outhouses by means of carbolic acid, whitewashed the buildings, etc., and the result was, that while we suffered so much more severely from malaria than Fort Morgan, yet but one case occurred at Fort Gaines, and that as follows: About the 10th of November, the disease was declared to have disappeared from Mobile, and during the last week in November, a general court martial was ordered to sit in Mobile. Among others (from Fort Gaines), the Post Surgeon and a Sergeant of one of the companies were summoned as witnesses. While this sergeant was in Mobile, he stopped several nights in a house where yellow fever had occurred. On the last day of the month, November, he returned to his post. Next morning, his name appeared on the company's sick list, but as he did not appear personally, he was not excused from duty. Just before sunset of the same day, I was sent for in great haste, and found him in bed, with some delirium, suffused eyes and countenance, severe pain in head and lumbar region, and vomiting a whitish flocculent substance quite freely. He was immediately sent to the hospital, placed in a hot mustard bath, and given an active cathartic. He soon became erratic, wanting any and everything, which was no sooner procured than it would be refused. He would get up by the fire, then lie on a bed for a moment, which not suiting him, would be changed for another. In my perplexity and ignorance, I began giving him quinia in gr. v. doses, but about midnight he began to have black vomit. Convulsions set in, and he sank into a comatose condition, and about 4 A.M., he died. Daylight revealed the fact that his face and neck were as yellow as brass. I *then* knew I had been dealing with a case of yellow fever. He was buried as soon as possible, and under instructions of the commanding officer, I burned everything in the ward with which he had come in contact, saturated the ward with a hot solution of carbolic acid and chloride of lime, and burned camphor on the stove. All this may seem laughable, but should be excused on account of my ignorance as to what should be done,

as I had only just begun the study of medicine, and knew only the routine treatment of the more ordinary diseases. The disease did not communicate itself to any other person, which was doubtless owing more to the extremely cold weather prevalent at that time, than to my destructive and disinfecting measure.

My next experience was in fighting yellow fever at a distance; in other words, keeping it from our doors when it approached so near, that with the least cessation of vigilance, it might have obtained a foothold, and decimated our garrison as it had done before, and since. This was at Fort Jefferson, Dry Tortugas. This place is particularly obnoxious to yellow fever, and it has occurred there a number of times. In 1867, it was brought there from Havana, eighty miles south, and carried off forty-two men and several officers before it was arrested. The Post Surgeon, his son, and the Post Commander, had died; a large part of the garrison were down with it when Dr. Mudd, sent there for his complicity in the assassination of President Lincoln, was called upon to do what he could, until other medical assistance could be obtained from Key West, seventy-five miles distant. One of the first acts of Dr. Mudd was, to order one hundred of the ten-inch columbiads—the full charge of powder for which is forty pounds—to be loaded, and about midnight, they were all fired off in rapid succession, filling the fort with its terrible concussion, and dense sulphurous smoke. As soon as other medical assistance arrived, all of the command able to do so, were moved to Loggerhead Key, three miles west, and the disease rapidly subsided.

Dr. Mudd deserved, and received a great deal of credit for his efforts under the circumstances, and it was an interesting question whether his action in firing off the cannon, had any effect in staying the progress of the disease. Some maintained that it did.

The *germs* of this epidemic, whereby two-thirds of a garrison of four companies had been attacked, with nearly fifty deaths, were proven before a military commission to have been brought in, or on, the person of an officer, who had visited Havana on the 4th of July, and about eight days after his return, was taken with it, but recovered. From this case, it spread with great rapidity, as many as forty cases having occurred during a single night. Here, malarial fevers are rare. I cannot recall a dozen marked cases during the two years and three months I was there, i. e., from January, 1869, to April, 1871.

On the 22d of May, 1870, yellow fever was declared epidemic in Key West, and as all our communication with the outer world was through that place, upon the recommendation of the Post Surgeon, a rigid quarantine was established; and from the 22d of May until the 10th of November, a period of nearly six months, no vessels were allowed to approach within a mile of the fort, under the penalty of being fired into, and no persons were permitted to come to, or go from, the fort.

All our mails, provisions, etc., were put off by the crew of the vessel on "Bird Key," nearly a mile to the leeward of the fort (the north-east trade winds prevail there); and after the vessel had left the mail matter, was fumigated or disinfected over burning

sulphur in a close apparatus devised for the purpose, and then brought, in many instances brown and discolored, to the fort for distribution. Should any provisions or clothing have been landed, a squad of prisoners were sent down with a mixture of whitewash and sulphate of iron, with which every box, barrel, and package was thoroughly coated, and allowed to remain in the hot sun for twenty-four hours, before being brought to the fort for issue.

Within, the fort was whitewashed throughout; the utmost cleanliness was enforced; tar was burned in the various bastions; privy vaults and sewers were washed out, disinfected, and nearly all locked up, outhouses being built outside on the wharves over deep water.

While, therefore, the epidemic at Key West carried off over one-third of the garrison and a large part of the population; appeared on board, and carried off two of the crew of the Government schooner plying between Key West and Fort Jefferson; and also attacked fatally, one of the light-keepers at Loggerhead Lighthouse, three miles west of us, who was so incautious as to go to Key West, although stopping there but a few hours; yet, surrounded as we were by the pestilence, and, as before said, in a place especially obnoxious to it, under the efficient means adopted, and which caused a great deal of discomfort and privation, we entirely escaped it.

Let us reverse the picture for a moment. During the summer of 1873, other medical officers were stationed there. *They* did not believe in the contagion of yellow fever. Oh, no! It depends upon local causes, and will appear independently of importation, and we will have none of your quarantine and police regulations, with all their attending discomforts and privations!

What was the result? Yellow fever was again prevalent in Key West. A child of one of the medical officers was allowed to go there, and soon after her return, was taken with yellow fever; and from this *focus*, it spread among the garrison, at that time consisting of only one small company of fifty or sixty men, and one officer. In a short time, the commanding officer, the hospital steward, his wife, and sixteen or eighteen of the men, were *dead*, and the rest were saved by precipitately evacuating the fort.

Last year, 1873, yellow fever appeared epidemically in Memphis, Shreveport, Pensacola, Key West, Dry Tortugas, and to a considerable extent, in Mobile, New Orleans, and other places.

At that time, I was in the U. S. Marine Hospital at Mobile, and the history of its appearance in Mobile, from the report of the board of health, and my own observations, was substantially as follows: A man by the name of Dixon, a resident of northeast Texas, becoming alarmed at the approach of yellow fever towards his section, thought to fly from it, and in so doing, passed through Shreveport, where it was then raging in a malignant form. He passed on down to New Orleans, on to Mobile, and took a steamer for the "Eastern Shore," a noted summer resort, where he proposed stopping. While on the steamer, he was taken sick, brought back to the city, and carried to the city hospital. This was on the 11th of Sep-

tember. On the 13th, he died from *black vomit*. On the 18th, three *sisters of charity*, who had attended him, were attacked, and died. Before another twenty-four hours had elapsed, a vast number of people fled from the city, crowding and pressing into service every means of conveyance; in fact, panic and demoralization ensued. The city authorities, under the advice of medical men and board of health, established a cordon of police around the *infected* hospital, and filling large street sprinklers with a strong solution of carbolic acid and sulphate of iron, had them driven through the streets in that neighborhood twice a day, saturating the streets and gutters so that the atmosphere was loaded with the fumes of the acid. This solution was made of two gallons of the *crude* carbolic acid, and twenty pounds of the sulphate of iron to the barrel of water.

The Marine Hospital was in close proximity to the City Hospital—next square—and under the advice of the surgeon in charge, several pailfuls of the above solution were daily applied around the hospital, in the privies, and gutters, and drains. Within the hospital, half a pound of the crystalized carbolic acid was dissolved in a pailful of boiling water, and with a brush-broom, sprinkled through all the wards and halls daily. The walls were whitewashed with carbolized whitewash.

Under this regime, the disease was confined almost exclusively to that portion of the city. The wind, for ten or twelve days, blew constantly from the northeast, and the disease spread slowly to the southwest; but being persistently followed by the "carbolic acid brigade," surrounding it with all the antiseptic power possessed by carbolic acid and sulphate of iron, it was, as I shall always believe, *smothered* to a great extent, and prevented from becoming epidemic.

No case occurred in our hospital until the surgeon in charge contracted it, as he believes, by standing in front of the City Hospital late one evening, while it was prevalent there. He was taken on the 9th of October, and recovered in a few days. A friend who was stopping with us, having sent his family North, myself and a colored attendant, attended the surgeon during his illness. On the 16th, our friend was taken sick, and on the 19th, *died* from the disease in its most malignant form, as stated by a physician of upwards of forty years' practice, who was called in consultation. Complete suppression of urine took place thirty-six hours previous to death, and there was copious black vomit. Having been doubly exposed in administering to the wants of the two foregoing cases, I was the next seized, and I propose to give the symptoms, treatment, and progress *in extenso*.

About 9 P.M., October 19th (about four hours after the death of our friend), I was seized with rigors; cold flashes played up and down the spinal column, seeming like the slapping of a towel saturated with ice-water, upon it. Apprehending the onset of yellow fever, I took thirty grains of quinia, a hot pediluvium, and went to bed. An intense headache set in, so that I could not rest, and at midnight I got up and sat by the fire until morning, when I proceeded about my duties. So long as I kept *going*, I would partially forget that anything was wrong; stopping for a moment, it would seem

as though every organ in the body was at odds and ends. About noon, feeling satisfied yellow fever had me in its grasp, I set about preparing for it. First, thirty grains hydrarg. mass was given me; two hours after, a large saline cathartic, and an enema. As soon as the bowels moved, thirty grains quinia, a hot mustard bath, then placed in bed, rolled up in several heavy blankets, a fire built, bed drawn up to it, and hot bricks rolled up in towels wrung out in hot water, and placed at the small of the back and feet. I then had intense headache, excruciating pain in lumbar region, suffused eyes and countenance, a tongue coated with a whitish fur, apparently an eighth of an inch thick, and quick pulse.

The fæcal discharges at first were natural, but soon became dark; and finally, black and ropy like cold tar, with a very fetid odor, adhering to the chamber like glue. My headache then left me. During the succeeding eighty hours, the treatment pursued was: Quinia, gr. v.; acid sulph. dil. *m.* xx. every two hours. The hot bricks were constantly changed as fast as they became cool; virtually, making a "*sweat-box*" under the seven or eight blankets. With an occasional draught of warm orange-leaf tea, causing copious perspiration, which was encouraged by all possible means. On the second day my stomach became quite irritable, but a dose of the acid quinia mixture seemed grateful to it, and by turning on the right side, I could almost imagine I felt the irritating material pass out through the pyloric orifice. In the course of the attack, I had several evacuations of the black fetid tenacious stools. I did not close my eyes or lose my consciousness until about 3 A.M. of the fourth day, when the disease seemed suddenly to leave me, and I fell into a sound sleep and slept until the afternoon, when I woke up, feeling refreshed and able to get up and go about my business, but kept my bed as a matter of precaution until the 27th, when I got up and went down stairs, and next day resumed my duties. As soon as convalescence was established, a voracious appetite manifested itself, and my tongue, which, in the meantime had become black, begun to exfoliate in patches and shreds, disclosing the raw and "beefy" tongue underneath the coating; and several days after when I saw my wife, she laughed at its ludicrous appearance. It was nearly two weeks after I had gone about my occupation, before it was entirely clear of the coating.

I paid particular attention to the condition of my pulse. During the first twenty-four hours, it was weak, thready, and compressible. During the second and third days, it gradually fell to 55, 50, and lower, and this condition alarmed me. I imagined I might die from sheer stoppage, if it kept on going down. This condition of the pulse could not be attributable to the sedative effect of the quinia (for I believe quinia in large and repeated doses has a sedative influence), because, while ordinarily a moderate use of quinia will, with me, produce fullness of the head, vertigo, tinnitus aurium, or almost total deafness; yet in this instance, although I had taken upward of half an ounce during four days and nights, it did not have any such effects, showing the large quantity taken was neutralized by the poison.

The same day convalescence was established in my case, one of the men who had nursed me was taken, and in all, nine cases occurred in our hospital; but, as heavy frosts had fallen during my attack, or in consequence of the antiseptic means again carried out, they were of a mild form, and all recovered under, essentially, the same treatment.

I took altogether, as before said, rather more than ʒ ss. of the quinia, and ʒ ij. of the acid sulph. dil., and I think this treatment to be the most correct, although many, if not most authors, decry the use of quinia in large doses. I do so upon the following hypothesis: According to Aitken, "Ammonia is universally present in the black vomit and breath; the urea of the suppressed urine is transformed by metamorphosis into carbonate of ammonia." The acid was given under the idea of neutralizing the tendency of the blood to become alkaline under this condition. The quinia was given with a view to counteract or destroy the poison. Quinia, which comes as near being a specific as anything we have in our *Armamentarum Medicamentum*, I have for a long time believed to act as an antiseptic. Calvert, I believe, has demonstrated, that a solution of quinia possesses the property of destroying certain minute forms of animal life, and I believe no harm can result from the use of quinia, however large or often repeated the dose may be, so long as the poison is not fully neutralized by it.

Again, believing the essential pathological lesion to occur in the kidneys, it was endeavored by the hot mustard baths, blankets, and hot bricks, to induce the skin to act vicariously for the kidneys. That it did, seemed confirmed by the strong ammoniacal odor given off by the skin, during the copious perspiration induced by these means. Diuretics are absolutely useless; their administration will only be adding fuel to the flames in the congested kidneys.

I have in the above narrative stated what I have observed, in part, in regard to yellow fever, from which I have come to the following conclusions: That it is *contagious*. In support of this, I cite the case of Fort Jefferson, in 1867 and 1873; Fort Morgan in 1867; Mobile in 1873. In all these instances, the *importation* on the *person*, and its propagation therefrom, was as clear as any event that can occur among men. In each of these instances, certain parties had been exposed to yellow fever at some distant point; arriving at their posts, or places where it was not, were, after a short period of incubation, seized with it; the next to be attacked would be those attending them, and so on. Let me cite another instance: While the surgeon of the hospital at Mobile was ill, five seamen from the ship "W. A. Campbell," just in from Liverpool, came to the hospital suffering from rheumatism or venereal diseases. Not having their hospital permits properly authenticated, I took them into the surgeon's room, in order that he should decide as to their admission or not. They were probably in the room five minutes. Several days after, *three* of the five were almost simultaneously attacked with yellow fever. I do not understand the term *contagion*, unless these instances establish it in a measure. It is not necessary that a person be

brought in immediate contact with those having yellow fever in order to be infected, any more than in case of small-pox, which all admit *is* contagious, yet one of our professors has in his lecture, related an instance where small-pox was communicated from the burning of an infected bed, to an invalid several hundred feet distant. It is certain, however, that the radius of contagion of yellow fever is extremely limited. It does not militate against the contagion of yellow fever to say, that because *some* will be infected, others will not, who have been equally exposed. The same phenomenon is seen in all known contagious diseases — scarlatina, *par excellence*—nor that it occurs sporadically as well as epidemically. This is also true of the admitted contagious diseases. There are other necessary elements requisite for the propagation of yellow fever, as well as other contagious diseases, besides simple contact. In this case, the principal one seems to be an accumulation of animal matter, and the exposure of the same to the surrounding atmosphere. The drainage of our southern cities is notoriously bad; mostly superficial, and is of little consequence in the removal of the accumulations of years. The privies are shallow pits, with no outlet; and if cleaned at all, the contents are necessarily exposed to the atmosphere by the night scavengers. Therefore, I believe, that if the removal of all animal matter, or its thorough disinfection or destruction could be accomplished in our southern cities, yellow fever would never present its former malignancy and fatality. While this cannot or will not be done, I am firmly convinced that the free use of carbolic acid will prevent yellow fever from becoming epidemic. This has been done in New Orleans for several years; where, on the appearance of yellow fever, its *foci* has been instantly surrounded by the "carbolic acid brigade," with the result, at least, if not of hemming it in on all sides, destroying its virulence.

As to the connection of yellow fever with malaria, I have shown, in the cases of Forts Morgan and Jefferson, with but little malarial influences, it has displayed all its destructive effects; while at other places, with overpowering exhalations of miasm, it does not appear. Moreover, I have shown, in all the instances related, that it owed its origin to importation on the person of some one or other. It has been said, that it has been carried in the hold of a ship from an infected port to another, where it has not been previously—that is, a section of infected atmosphere has been locked up, so to speak, in the hold of a vessel, and carried to another port —even across the Atlantic, and upon liberation, propagated the disease. But these ships are navigated by human beings, and unless some of those on board have had it at the port of infection, or during the voyage, I doubt its propagation at any port free from it; consequently, a vessel coming from an infected port, unless she should have had cases on board, is never put in quarantine, and so the theory that it propagated through the person, is an admitted fact.

Finally, should it ever be my fortune to be located in a place liable to the irruption of yellow fever, I would recommend the removal of all animal matter, or its thorough disinfection by means of carbolic acid. In case

of its appearance, I would make free use of it in and around all buildings where it may exist, with as near absolute non-intercourse as practicable. I believe carbolic acid holds an almost unlimited power over the germs of yellow fever, and in many respects, is one of the greatest additions to our stock of therapeutical agents in other diseases, and causes of disease, as well as the specific one under consideration.

In the treatment, I would adopt that indicated, to-wit: The free evacuation of the alimentary canal; the free use of quinia; every means in our power of hastening and promoting active diaphoresis, and especially good nursing.

There are many interesting facts in regard to yellow fever, to be gleaned from "the books," by which this paper could have been extended, *ad infinitum;* but as they are accessible to all, I close without reference to them.

Editorial Department.

THE WAY THEY DO IT.

CANCER DOCTORS have some "ways that are dark, and tricks that are vain," like Bret Harte's "Heathen Chinee." Their system appears to be the same in outline wherever the rascals exist, and is essentially as follows:

1. He who aspires to the dignity of a "Cancer Doctor," must provide himself with an efficient caustic, or set of caustics, which may be used in the form of a powder, paste or plaster.

2. The quack must disguise the articles by suitable coloring materials, and stoutly deny that they are caustics.

3. He must advertise largely that the great Dr. Tumorsmash will "take out the cancers without the use of knife or caustic, and without pain," and guarantee the cure.

4. When the patients flock in, he must pronounce everything a cancer, whether it be a wart, corn, fatty tumor, ulcer, necrosis, sarcoma, or what not.

Now he is ready, and his success will depend upon his enterprise in carrying out the plan.

Honest John Leatherhead, the shoemaker, has observed a lump upon the surface of his thigh, in fact an encysted tumor. It gets in the way of his lapstone, gets hit with his pegging hammer, and, when it is hammered too much, becomes swollen and tender. Mrs. Leatherhead has read Dr. Tumorsmash's handbill, and advises John to go and see him. John, who has eyed the swelling for many a month with fear and suspicion, determines to have a talk with the great man, especially as his "consultations are free." He dresses in his

best, and presents himself. The quack views him from head to foot, and draws him out in conversation, to gauge the "size of his pile." He then looks at the encysted tumor, and, with solemn and ponderous dignity, pronounces it a cancer of the most malignant type. John turns pale, and his leather head shakes on his shoulders. Can he be cured? Yes, says Dr. Tumorsmash, but it will cost $500. Leatherhead pleads poverty, but finally pays $100 in advance for a guaranteed cure.

"I believe you take out cancers without pain," says he.

"Certainly," replies the quack, "that I always do. However, I must put you under a course of preliminary treatment for a few days. This preliminary treatment is a little painful, but you can bear it, and then I will remove the tumor without the slightest suffering."

Dr. Tumorsmash now administers a good dose of morphine; next he surrounds the tumor with a circle of adhesive plaster to protect the adjacent skin, and claps on his caustic. This hurts severely, but then it is only "preliminary treatment," and meanwhile he plies the morphine vigorously to keep Leatherhead as quiet as possible. After a proper number of hours, when he judges that he has produced a sufficiently deep slough, he removes the caustic and applies poultices. The pain now ceases, and the poultices are continued until the eschar is fully separated from the living flesh. Now the quack is ready for his grand operation of removing the tumor "without pain." The patient's friends assemble, the poultice is removed, and the surface sponged clean. Dr. Tumorsmash discourses as follows: "My friends, I have called you in to see one of the triumphs of modern science. If you look at this tumor, you will see how wonderfully my medicine discriminates between the cancer and the natural flesh. Look at this deep groove (pointing to the line of demarcation). That was the boundary of the cancer, and you see that this wonderful remedy has followed the disease everywhere exactly up to that line, and has nowhere gone a hair beyond it. It has the property of killing the cancer to its remotest roots, and has no effect on healthy flesh. I will now proceed to remove it." Suiting the action to the word, he gracefully seizes the rotten mass with his forceps, and lifts it out of its cavity "without pain."

Leatherhead is amazed, and profoundly grateful. In the course of three months the ulcer is healed, and for the rest of his life he and Mrs. Leatherhead never weary of sounding the praises of Dr. Tumorsmash.

A medical friend of mine once went to St. Louis to see a "Cancer Doctor" who, by dint of much advertising, had gathered a great array of patients from the whole West, and was doing a magnificent business. My friend began to negotiate with him to buy his secret.

The quack was willing to sell for a good price, and took him around to see his patients. There was a legion of them. Some had encysted tumors, some fatty tumors, some warts and moles, and some chronic ulcers, etc.; but in all that collection there were only three or four cancers. After returning to the hotel, the two sat down to smoke and talk together. Said my friend, "We have been around and seen a great number of cases, now how many of them do you

call cancer?" The quack replied, "Oh, well, I *call* them all cancer, but of course you and I know that only three or four of them are really so. If you recall my conversation, you will remember that I did not promise those particular patients a cure, but the rest of them I shall cure to a certainty."

Aside from the energy of his advertising, the reputation of the "Cancer Doctor" depends on the fact that the great majority of the tumors under his treatment are innocent, and of course will not return after they are removed.

Domestic methods sometimes obtain quite a reputation for curing cancers. One plan is to express the juice from sheep-sorrel and dry it down to the consistency of treacle. You now have an impure but concentrated preparation of oxalic acid, which, locally applied, has cured many a case popularly supposed to be cancer. It is said to be severely painful.

An old farmer in this State used to make a cancer cure as follows: He went to the woods and obtained the bark of a certain tree, which he burned to ashes. He then leached the ashes, and boiled the ley down to an impure potash. With this as a caustic, he proceeded to eat out various things which he supposed to be cancers, and cured them. He made a secret of the species of tree from which he took the bark, and sold or gave the secret to a young man, who wanted me to test the article for him by experimenting on my patients, while he retained his wonderful secret to make his fortune, if it proved successful. He supposed that the virtues of his potash depended on some special property of the kind of tree from which it was obtained.

Tannin, burnt alum, and sundry other articles which act by their desiccating power, will kill a structure of tissue on the surface of fungous growths, polypi, etc., and, by frequently scraping off the eschar and re-applying, the powder can be made to destroy considerable bulky growths without pain. I have not been able to make them act on the more solid tissues of scirrhus, and they, like all other local remedies, leave the contaminated lymphatic glands still in existence. E. A.

COMMENCEMENT EXERCISES OF THE CHICAGO MEDICAL COLLEGE, MEDICAL DEPARTMENT OF NORTHWESTERN UNIVERSITY.

THE public exercises connected with the Sixteenth Annual Commencement in this College, took place on Monday and Tuesday, the 15th and 16th of March, 1875. On Monday afternoon, the candidates for graduation, with the Faculty of the College, and any members of the profession who chose to attend, assembled in the College Hall, and devoted two hours to the reading of theses, and the public examination of the candidates on the topics discussed in their respective papers. The class then repaired to the amphitheatre of the Mercy Hospital, where they witnessed

the performance of the operation for the removal of stone from the bladder, by Prof. E. Andrews.

The patient was a boy, aged only four years; but the calculus was of large size.

On Tuesday, the Commencement Exercises, proper, commenced in the College Hall, at 2½ P.M. Before the hour, the room was completely filled by an audience of gentlemen and ladies. A good band of music was in attendance, and at suitable intervals, added much to the enjoyment of the occasion. Prayer was offered by the Rev. Arthur Edwards; the certificates of examination for the under graduates were presented by the Secretary of the Faculty. The Professor of Practical Surgery also presented special certificates to those who had served as assistants in the hospital. The Dean of the Faculty awarded the prize for the best thesis, to W. H. H. Hutton; and for the second best, to Chauncey A. Kelsey.

C. H. Fowler, D.D., President of the Northwestern University, then conferred the Degree of Doctor of Medicine on forty-five candidates, who had been duly recommended by the Faculty, and accompanied the same by a brief, but very appropriate charge. This was responded to, in behalf of the class, by H. D. Hardacker, A.B., in a very happy manner.

Then followed the formal Valedictory Address, by Prof. W. E. Quine, on *Success*. This performance was one of more than ordinary merit, and was listened to with close attention, and much real profit. The collegiate year just closed, appears to have been one of gratifying prosperity. The whole number of students in the different classes was 140. The number of Degrees conferred was forty-five, namely; three ad eundem, two honorary, and forty in the regular course. In regard to the preliminary education of the graduates in the regular course, we were gratified to learn that seven were graduates of literary institutions; and all but two had received more or less mental training in the higher schools and colleges of the country. We still hope the time will come, when no young man will think of commencing the study of medicine until he has a thorough mental training, and a good knowledge of the sciences.

AGUE AS A PROVIDENTIAL DISPENSATION.

THE wisdom and kindness of Providence in the allotment of disease, is not always appreciated by the sufferers themselves, at least. Mark Twain in his narrative of "Old Times on the Mississippi," in the March *Atlantic*, makes clear, however, the happy and providential aspect of one disease, at least. Describing graphically the life and aspect on the low bottom lands bordering the river, during a big rise and overflow, he says:

"There were crazy rail-fences sticking a foot or two above the water, with one or two jeans-clad, chills-

rocked, yellow-faced, male miserables roasting on the top-rail, elbows on knees, jaws in hands, grinding tobacco, and discharging the result at floating chips, through crevices left by last milk-teeth; while the rest of the family, and the few farm animals, were huddled together in an empty wood-flat, riding at her moorings close at hand. In this flat-boat, the family would have to cook, and eat, and sleep, for a lesser or greater number of days (or possibly weeks), until the river should fall two or three feet, and let them get back to their log-cabin and their chills again—*chills being a merciful provision of an all-wise Providence, to enable them to take exercise without exertion.*

Correspondence.

A LETTER FROM PARIS.

EDITORS MEDICAL EXAMINER: Two women (Mrs. Garnet Anderson, of London, and Mrs. Putnam Jacobi, of New York,) have already received the degree of Doctor in Medicine from the French School, and this winter there are about a dozen women inscribed at the Faculty of Paris. Yet the profession in France does not agree as to the propriety of having women doctors so unanimously as might be supposed. Lately the *Union Medicale*, a journal occupying an influential position, has contained two articles upon "*femmes - medicins*," which are very marked in their opposition to woman's entrance upon a medical career. The writer, after enlarging upon the distaste with which one views a woman in the dissecting or post-mortem room, turns his attention to the practical life that follows upon medical studies: "And, in the exercise of the art, suppose the doctress reaches the eighth month of a pregnancy (a circumstance which will naturally be frequent if the doctresses are numerous), see this woman entering the bed-room of her patient, preceded by an enormous belly, approaching with difficulty to feel the pulse, to auscult in front and behind, an object of repugnance for the patient, if man or woman; an object of fright from her deformity, if the patient is a child. The spectacle would be grotesque, if it were not pitiful." Further on we find the following: "A young woman belonging to one of the most respectable families of Paris, mother of two children, reached her third pregnancy. From an unfounded sentiment of prudery she did not wish to receive the care of a physician during her confinement. She was assisted by a midwife. At the end of the labor, a grave uterine hæmorrhage declared itself. It became formidable. What

did the woman-doctor do? She fainted! It was the way to relieve herself from all responsibility, but during that syncope the poor young mother perished. I ask, do we see accoucheurs, in the presence of an uterine hæmorrhage, faint, in place of arresting the flow? Syncope is in the nature of woman; it will be necessarily one of the attributes of a doctress."

In concluding the first article, the writer argues that woman was not intended for medical investigations: "No, she was not created to meditate upon a skeleton, to explain the state of our organs by percussion and auscultation, to plunge her small hands into the abdomen of the dead, and there search the cause of death." Mentioning the University of Zurich, the writer calls attention to the disturbances made by the female students (many of them were Russians), on account of which the Emperor of Russia issued a special decree, forbidding the right of practice in Russia for any woman with a Zurich diploma. It is related that one of the professors at that institution, having a "sore throat," requested the students not to smoke in the lecture-room. The next day the male students threw away their cigars before entering, but the females entered with immense pipes in their mouths, and smoked "*comme des caporaux.*"

These reflections upon the character of women as medical students do not accord with my observations in Paris. I have yet to see one of them act in a way to attract attention. Though in no way approving their choice of a profession, I have been struck by the earnest, unassuming manner in which they conduct themselves. As a rule, they are attired very plainly in black, wearing little or no jewelry, but there is one rather pretty little woman, of perhaps twenty years (this is dangerous ground, so I must say, as the French do, "under all reserve,") who attends the lectures and demonstrations on practical anatomy, wearing the bright colors that best become her, but which form a striking contrast with the surroundings. Her entrance in the lecture room is generally acknowledged by some few suggestive "smackings" of lips, but thus far I have noticed no other manifestations from the students.

Something of a rivalry appears to exist at present among the eye specialists of Paris, in regard to dispensary service, and medical visitors are received with a great deal of attention. Desmarres (fils), Galezowski, and Wecker have the principal clinics. The latter has quite an elegant mansion for his free service on the Rue du Cherche-Midi, while the other two content themselves with less pretentious rooms on the Rue Hautefeuille and Rue Dauphine.

I notice that anæsthetics are used rather sparingly, and very many operations, even to enucleation of the ball, are performed without ether or chloroform. Undoubtedly, this is a neat mode and agreeable for the operator, but hardly in accordance with our American ideas of justice to the patient.

Solutions of atropia and the nitrate of silver occupy their usual prominent position in these eye clinics, but Galezowski has taken to operative interference in two diseases that are classically treated with caustics. I refer to chronic granulations of the lids and purulent ophthalmia. In obsti-

nate or severe cases, he excises a small portion of the conjunctiva, and follows the operation with very weak solutions of nitrate of silver when the inflammation has subsided.

For the granulations, the excision is made in the cul-de-sac, from the palpebral conjunctiva, within or among the posterior granulations. Complete rest for a day or two, and then applications as mentioned (Argent. Nit. grs. i. ij.; Aquæ ℥ j.). With this line of treatment he claims to radically cure the most obstinate cases.

As to the ophthalmia, the operation is but changed in position. The excision is made in the orbital conjunctiva, and Galezowski's reasoning is, that the pus being harmless, the excision relieves the tension, and thus counteracts the tendency to perforation of the cornea. His results, thus far, have been very satisfactory.

Since Huxley exposed the fallacy of Bastian's experiments in regard to spontaneous generation, little has been attempted in that line; but now, so distinguished a body as the French Academy of Medicine finds itself called upon to investigate that subject. Dr. Arthur Bergeron has been examining, microscopically, the contents of abscesses that have never been in contact with the exterior air, and he found that the pus from adult subjects contained animalcules (protozoaires) while that from young subjects gave no trace of them. From these facts Dr. Bergeron concludes that he has made a great discovery, and that he has found the solution of the great question of spontaneous generation, "from simple modification of organic matter without intervention of germs or ferments."

M. Pasteur has brought these investigations before the Academy of Medicine, but at present, that body, not having been directly addressed by the investigator, is unable to appoint a committee of inquiry. Perhaps it is just as well that this unsurmountable barrier of dignity should prevent the Academy from giving much serious attention to this subject, but these researches are being pretty widely commented upon by the journals, and doubtless the question will be thoroughly ventilated.

C. C. MATTESON, M.D.

PARIS, Feb. 25th, 1875.

Dr. CAZIN has had occasion to practice the Cæsarian operation in a case of uterine fibroids, and has had the good fortune to save mother and child. He operated on a woman, aged thirty-nine, in whom, toward the sixth month of pregnancy, fibroid tumors were recognized in the posterior and inferior wall of the uterus. Labor set in the seventh month; after four days of pains, the waters ruptured and the hand escaped, the child still living; but as it could not be extracted either by forceps or by version, recourse was had to the Cæsarian operation. The most minute precautions were taken; there were hæmorrhage and syncope, inertia of the uterus, distention of the belly to such a degree that it became necessary to puncture the bowel to give exit to gas; there was vesical paralysis, and an abscess formed between the uterus and the abdominal wall. In spite of all these complications, the patient got well; and the child, baptized Cæsar, throve well. This operation was done some months ago, but the author has ascertained that the fibroids are in process of diminution.—*Gaz. Med.*

Society Reports.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, MARCH 22D, 1875.

Reported by Ralph E. Starkweather, M.D.

THE Society met as usual at the Grand Pacific Hotel, the President, Dr. Bartlett, in the chair.

Dr. Etheridge read the following report from the Committee on Therapeutics:

ERGOTINE.

Dr. E. R. Squibb, of Brooklyn, submitted some notes to the American Pharmaceutical Association in 1873, which are published in the Association's proceedings for that year, on Ergot and Ergotine. After speaking of the market value of ergot crude, and its pharmaceutical manipulations, he speaks as follows of ergotine, so called:

"The existence of one or more active principles, which may be isolated for therapeutic use, has been very generally believed, and various substances have been extracted and sold under the name of ergotine—those of different makers having different properties and different doses, but all producing some of the effects of ergot, though in different degrees. After a careful attention to the literature of this subject, and comparing it with the results which seem to have been realized in practice by experience, the writer does not believe that there is an active principle separable from ergot, which, in any proper sense, represents the drug. Like senna, rhubarb, and many other drugs, its effects seem to be dependent upon a natural association of its various separable elements. If this be true, there is no such thing as ergotine, and the various substances so called only represent the activity of the drug, as they represent more or less perfectly its entire composition. Of course, certain of its constituents, such as lignin, starch, fixed oil, gum, etc., are known to be inert, and such being excluded by choice of a proper menstruum for extracting it, the nearer its preparations come to representing or containing all the remainder of the drug the better."

ERGOT—AQUEOUS AND ALCOHOLIC SOLUTIONS OF.

These two differ in their effects on the circulatory apparatus. The aqueous solution excites the activity of the cardiac inhibitory centres, and the vaso-motor centre in the medulla; it slackens the pulse, narrows the calibre of the small arteries, and increases the blood-pressure. Very large doses paralyze the heart at once, and so effectually that the induced current fails to restore it. These effects on the heart and vessels are not at all produced by the alcoholic solution.

Thel atter produces symptoms akin to those of æro-narcotic poisoning, viz.: irritation of the mucous membrane of the stomach and bowels, tonic cramps, and agitative violent spasms—symptoms which cannot be produced by aqueous solutions of ergot.

ERGOTINE, IN VARICOSE VEINS.

Dr. Paul Vogt, assistant surgeon in the out-patient clinic at Greifswald, first tried ergotine injections for varicose veins. In the *Berliner Klinische Wochenschrift* for March 4, 1872, he first reports the use of this drug as above indicated. An extensive varix, which had occupied the leg for years, yielded in the course of a week to two injections. Subsequently there followed diffuse light inflammation, leaving a hard, circumscribed infiltration, which eventually subsided.

In many other cases he has used, in a similar manner and with as remarkable result, as in varicocele, hæmorrhoids, certain forms of angioma, telangiectasis, etc.

The most generally-accepted idea is, as to the modus operandi of ergot subcutaneously, that diminution of the calibre of vessels is produced by the drug stimulating the smooth muscle of the veins and arteries to contract. In its use in varicose veins, it doubtless partially produces diminution of the capacity of the veins, by producing the inflammatory infiltration above mentioned, which directly compresses the veins.

In the same periodical above mentioned for August, 1874, Dr. Max Schuler stated, as a result of many experiments, that ergot produces contraction of arterioles. The smaller the vessel, the longer and firmer is the contraction. Arteries increase proportionally in smooth muscular fibre as they become smaller. From this fact it is inferred that ergot exerts its effect on this muscular fibre, *not* necessarily through the vaso-motor nerves, for the same effect—viz., vascular contraction—could be secured in a part injected with solution of ergot after the sympathetic nerve supplying the part was cut.

So firm indeed is this contraction, that it cannot be changed by persistent inhalations of nitrite of amyl.

From a knowledge of this effect of ergot on the smaller vessels, to the use of this medicament in hæmorrhages, as epistaxis, hæmatemesis, hæmoptysis, hæmorrhage from the bowels, kidneys, etc., is but a step.

A close observer of medical literature sees, of late months, very many accounts of the use of this drug in these troubles hypodermically. Ergot by the stomach will produce none of the effects that can be called hæmostatic; subcutaneously, it will.

Dr. Drasche, of Vienna, reports many cases of hæmatemesis being treated with subcutaneous injections of ergot. The point of selection was the neighborhood of the pectoral muscle. Sometimes more than one injection was necessary. After the first one there is always a diminution, and, in many cases, a cessation of bleeding.

One phthisical young man, who had had violent epistaxis every morning for a week, and had been unsuccessfully treated with ice and perchloride of iron, was completely cured after two one-grain injections of ergot.

In most cases of hæmatemesis ergot was used after the ordinary means had been used in vain, and the checking of the hæmorrhage was prompt.

It was successful after ergot had been used in large quantities in the stomach.

In hæmorrhages in scorbutus ergot has been successfully used, though the amount and duration of the local irritation were considerable.

SULPHIDE OF CARBON IN THE TREATMENT OF ATONIC ULCERS (SORES) AND CHRONIC ULCERATIONS.

[*By Paul Guillaumet, Interne of St. Lazare.*]

"If there is any affection upon which the therapeutical armamentarium has been largely used from time immemorial with very variable success, it is certainly chronic ulcers.

As I have thought that there is a certain interest attaching to any new remedy addressed to these obstinate affections, I desire to speak of the local application of the sulphide of carbon in ulcerations, differing in characteristics and origins, but presenting, all of them, common features, viz., *atony* and *chronicity*, with a tendency to extension, and a total absence of reparative nature and cicatrization."

This agent was used thus in ulcerations first, in 1867, by M. Michel, when he was an interne in Saint Lazare. Its abominably nauseous odor, and its toxic action are the predominant characteristics of carbon sulphide, which have doubtless kept it from extended use.

The German physicians have used this agent in arthralgias and neuralgias successfully, probably through its refrigerant and anæsthetic action. Compresses soaked in carbic sulphide in some aromatic essence were placed over the painful part, and renewed from time to time till relief followed. Krimmer used it in the treatment of white swellings. Ewenbull used its vapors mixed with those of iodine in certain affections of the eye and ear. It has also been used upon the erysipelatous redness of chilblains. These constitute the only uses, externally, to which this agent has been devoted.

The writer details three cases, selected from a large number thus treated, one of which is here given in full.

"CASE I. — *Large ulceration of the right labium majoram, of four and a half months' duration, in a syphilitic subject. Cure in fifteen days.*

Alice V., æt. 23, admitted May 25, 1874. Upon the inner surface of the right labium majoram, extending a little to the outer surface, she has a large ulceration, extending nearly the whole length of the labium, measuring three centimetres in breadth. It is atonic, has a grayish base, with irregular serrated borders, and has a depth of about four to five millimetres.

The patient evidently has syphilitic antecedents. As to the subject of the origin of this ulcer, she says that she experienced a severe itching produced by some small pimples, grouped together in that region, and that she scratched them with her finger-nails and produced an excoriation, which, irritated by frictions of the tight clothing, became inflamed and produced an ulceration. For some days subsequently she paid no attention to it, but seeing it increase daily instead of diminishing, she concluded to use some poultices and cerate. Then she visited St. Louis Hospital, and was regularly cauterized every eight days with various caustics.

When she entered this hospital she had had this ulceration four and a half months, without its being in the

least diminished. From this time the sulphide of carbon was used and with success as complete as unexpected. Thirteen applications in *fifteen days* sufficed to produce complete cicatrization of the ulcer."

Sulphide of carbon has been used with good results in the treatment of syphilitic ulcerations, ulcerating tumors, ulcerations of the neck, of the vagina, of the vulva, corroding ulcers, ulcerations in scrofulous subjects, etc.

After the first applications of this agent there is no noticeable change in the aspect of the ulcer. After the fifth or sixth application a sensible amelioration and a very rapid course to cicatrization follow. The progressiveness of improvement is always so characterized by regularity that, by comparing a portion of the raw ulcer with a portion already healed over, the physician is enabled to predict exactly the number of applications still necessary to complete a cure.

It must be used with care because of its extreme volatility and nauseous odor. The method of applying it is as follows, according to the author: The bottle containing *pure* sulphide of carbon is held very near to the ulcer to be dressed; a piece of charpie is soaked in the liquid, and squeezed upon the mouth of the bottle to expel any excess of the drug; then the piece of charpie is lightly and rapidly brushed over the surface of the ulcer, which is immediately covered with a powder of subnitrate of bismuth, or of starch. These powders, inert of themselves, play a double part: they isolate the labia (when one of them is the seat of the sore), and diminish evaporation of the medicine which is accelerated by the body heat.

The writer thinks that its action is very obscure. It coagulates the albumen of the ulcers, and it seems neither to hasten nor retard fermention. He says the following changes occur after applying the medicament: "A change of color of the tissues occurs; this modification, which is not very evident in pale ulcers, is plainly shown on those whose granulations are active; the tissues become pale. This decoloration is not of long duration. At the end of a certain time it disappears, to be replaced by a very red blush. This is very easily demonstrated upon granulating ulcers. Then comes the pain; a pain almost instantaneous, very severe, but very fugacious. I have seen in certain subjects at this time a period of anæsthesia succeed which lasted several hours, whilst the painful period does not exceed twenty to sixty seconds in most patients. This pain, very acute after the first few applications, diminishes in a few days, to be almost none at all after the last applications. As a rule, it may be said that its intensity is in inverse ratio to the number of the dressings."

"The action of this medicament is so rapid upon recent sores that after the first or second dressing a change is readily noticeable. It is much less rapid upon very old ulcers, at least after the first applications. It is not rare to dress an old sore five or six times before obtaining an appreciable modification. But from the day that a change is noticed the process of cicatrization is very rapid. The amount of the sulphide to be used having a great influence upon the results to be obtained, should be proportional to the ancientness and vitality of the ulcer. In using a rather

large dose of carbon sulphide, I have not had any scarring follow, nor poisoning accident if minims were used, but this has seemed to retard rather than accelerate cicatrization."

In conclusion, the author summarizes the principal characteristics of this agent in the following propositions:

1. "Sulphide of carbon is a powerful cicatrizer.

2. "Its action is limited and rapid. It is wholly local, and does not produce a single accident which follows the inhalation of its vapors.

3. "Its application is accompanied with a pain sometimes very severe, proportional to the susceptibility of the patient, but of a very short duration in most patients, followed immediately by a period of anæsthesia which is not constant.

4. "Sulphide of carbon acts upon ulcers of various kinds, (syphilitic, scrofulous, diphtheritic, etc.,) and changes them all beneficially.

5. "This is a valuable agent in the treatment of wounds and ulcers, presenting the common characteristics of *atony* and *chronicity*."

Dr. Bevan, from the Committee on Clinical Reports, next read the following notes of cases occuring under his care in Cook County Hospital:

CHRONIC MYELITIS.

Peter Lorentzen, age 50; laborer; Dane; admitted December 4th, 1874.

The patient states that he was well until a year ago last October. While working on a ladder, he slipped, and fell some sixteen feet, striking on his back. He was confined to his bed four months, when he was again able to resume business. After working about three months, he experienced a recurrence of the pain in the side and back. This soon became so severe, that he again discontinued work. He came to the hospital last June, remaining under treatment some five weeks, and again returned home. Ever since this time, the pain has steadily increased. For the past four weeks, he has been much worse; he has been unable to walk; says his legs are getting weak, and complains of sharp, stitching pain, shooting toward the extremities. Appetite has always been good. Bowels inclined to constipation.

On admission, patient somewhat emaciated; face, anxious; has the appearance of suffering; feels more comfortable when the thighs are flexed.

On examination, no tenderness along the spine; no swelling or pain in any of the joints, although the patient thinks he is suffering from rheumatism. In walking, he has to be supported, and holds the lower portion of the spine in a fixed position, and has a kind of rotary gait. The left hip is prominent, the trochanter apparently standing out. Pressure, however, does not cause pain. He is ordered pot. iodid. gr. vij, and strych. sulph. gr. $\frac{1}{30}$, in a simple bitter tonic, three times a day.

Dec. 18th.—Patient sleeps poorly at night; the pain seems to be worse.

Jan. 2.—The patient still complains of severe pain in left lumbar region. Sleeps poorly at night. Is becoming more emaciated. Appetite pretty good; bowels costive.

Feb. 1.—Patient thinks he has not improved any since he came into the house. Cannot stand or walk. Has constant and severe pain in the left leg, from the hip to the knee, interfering with sleep.

Feb. 4. — The potass. iodid. and strychnia were discontinued, and instead, fl. ext. ergota 3 ss., three times a day, and a mixture of equal parts tr. iodini and glycerine, to be applied over the spine and sacrum.

Feb. 15.—Patient has continued the use of the last prescription up to this time. He says he has a good deal less pain; sleeps well; has a good appetite; and, in fact, feels much improved. Pretty fair motion of the legs.

March 1. — Continued improvement.

SUBACUTE MENINGITIS.

Alice Morris, aged 21; laundress; native of United States; admitted January 19, 1875; died Feb. 4, 1875.

About three months ago, patient was working in a laundry as ironer, in a damp basement where there was no fire. In changing her irons, she was compelled to go from this cold room into the drying room, which was always kept at a high temperature, thus constantly exposing herself to extremes of temperature. She had been working thus about four months, when she began to have pain in the head, nausea, and vomiting. Would wake up in the night with an attack of pain in the head; would eject the contents of the stomach and feel relieved. The attacks were most apt to occur about 3 o'clock, A.M.

The pain in the head constantly increased; became throbbing in character. She soon had to discontinue all work, and would sit around for several hours, stupid with pain. The sight became impaired; light was painful; luminous objects seemed to float before the eyes; smell and taste were both partially lost, All food had an acid taste. Bowels costive, moving once or twice a week. She has a severe shooting pain in the back of the neck, aggravated by motion or pressure. Sleeps poorly. Is dizzy, and unable to walk unsupported. She can scarcely remember anything, even common events.

On admission, patient poorly nourished; skin normal; tongue flabby and tremulous, covered with brownish fur. Prefers to lie on the side, with the limbs drawn up, and eyes shaded from the light. Slight movements of the head or neck cause facial contortions, indicative of severe pain.

Pulse 50. Resp. 22.

℞.—Potass. brom., gr. xv.
Strychnia sulph., gr. 1–30.
Three times a day.

The progress of the case was steadily downward.

Feb. 1.—Patient seems to be in an almost comatose condition. She is roused with difficulty, and cannot make an intelligent response to questions. Urine and fæces pass unconciously. Takes no nourishment; will not swallow, but allows liquids to run out of the mouth. Pupils dilated.

Feb. 4.—*Died.*

The autopsy revealed some tuberculous deposit in the lungs. On opening the brain-box, several ounces of clear serum escaped from beneath the membranes of the brain and cord. Other organs healthy.

EPILEPSY.

CASE 1.—Wm. Hutchinson, aged 24; bar-tender; native of United States; admitted January 27, 1875; discharged February 6, 1875.

Patient was always well until he was nine years of age, when he was struck upon the head with a hatchet. Does not remember whether he was much affected by it at the time or

not. (States that at the age of twelve, he was bitten by a mad dog). His health was good until eight years ago, when, while walking along the street on a very hot day, he suddenly fell, and was unconcious for an hour or two. During the next two days he suffered from several such attacks. During this time he had very severe pain in the head. One month later, he had a recurrence of the same kind of attacks, and the pain in the head was present also.

He enjoyed immunity from attacks until one and a half years ago, when he went through precisely the same experience. At this time, he was sick for two weeks, suffering from pain in the head, and occasional loss of conciousness. His friends said he was convulsed during the attacks, requiring several men to hold him. He has been a steady drinker for several years until last Christmas; since then he totally abstained until a week ago Monday, when he began to drink very hard for two days only. Last Saturday, he began having pain in the head and feeling drowsy. This continued increasing until the convulsive attacks returned again. He was brought here suffering from those attacks. Ordered

Pot. brom.,	gr. xv.
Chloral hyd.,	gr. xv.

Every three or four hours.

Feb. 2.—Patient seems to be improving slowly. The attacks are less frequent. He is ordered

Pot. brom.,	gr. xx.
Fl. ext. valerian,	ʒ i.

Three times daily.

Feb. 6.—Thinks he feels well enough to go home, and is discharged.

March 4.—One month later, patient was brought in with another attack similar in character. He is put upon pot. brom. gr. cxx. in the twenty-four hours, with the effect of speedily reducing the number of seizures and the cephalalgia.

CASE 2.—Emma Rauworth, aged 35; housewife; native of England; admitted February 6, 1875.

For the past seventeen years, patient has had occasional epileptic attacks, not traceable to any exciting cause, as the patient occasionally goes six or eight months without a fit, and then may have two or three at short intervals. Has had five children—three alive now, and healthy; two died in infancy. She menstruates regularly and easily.

Six weeks ago, the patient began to show signs of the present attack. She would sit down near the fire and drop into a partially insensible condition, resembling sleep, from which it would be impossible to rouse her. She would enjoy her natural slumber at night; would rouse up about 5 A.M.; soon after, would go into this stupor, and remain so until 3 or 4 o'clock P.M. On awaking, she seems trying to escape some imaginary danger, but in a few moments seems to revive and converse naturally. During the sleep, she does not know anything about what transpires. She has been moved from place to place, even several miles in a buggy, without the slightest knowledge of the event. She has lately complained of pain and sense of weight in the top of the head. She has lost flesh; never asks for food, but will take it, if offered, when awake. Bowels move regularly each day, and urine passes normally. She attends to these calls herself.

10 A.M.—She is now lying quietly in stupor; has been for four or five

hours; breathes easily. Pulse 74; resp. 12. Cheeks a little colored; muscles flaccid, with occasional twitching; jaws firmly closed; eyelids resist efforts to open; eyes rolled upward.

Feb. 10.—℞.—Pot. brom., gr. xx., three times a day.

11.—Had a well marked epileptic fit yesterday, but of short duration.

Increased the dose to gr. xxx., three times a day.

12.—Feels better; sleeps pretty well now most all night.

15.—Instead of a stupor, the patient now experiences a pain in the head, about 5 A.M.

20.—The pain is growing less.

21.—Was religiously excited, and is a little worse.

30.—Better again.

March 2.—Is ordered as a tonic,

Strych. sulph.,	gr. 1–60.
Ac. nit. dil.,	gtt. v.
In the infus. gent.,	℥ ss.

After meals.

During the discussion of the above papers, Dr. Bevan mentioned a case of diabetes mellitus which he had treated with good results by the use of the fluid extract of ergot, in doses (finally) of one fluid drachm four times a day. The amount of urine first voided was sixteen pints daily. Ten weeks after beginning treatment the amount of urine daily voided was only four pints, and very much less saccharine; the thirst and emaciation of the patient had become much less.

Dr. Owens queried whether there was any disease ergot would not relieve, and quoted a case of diarrhœa of several months' duration (at least seven months) which he had relieved by the use of wine of ergot. In regard to the sulphide of carbon, his experience in its use upon ulcers had been satisfactory. One of his patients had had an ulcer upon each leg. He treated one of them by elevating the limb and warm water dressings; the other he treated with the sulphide of carbon, and healed the ulcer quickly. The time lost by the first method of treatment was over two weeks.

The Secretary, Dr. Hyde, thought that in many instances chronic ulcers could be treated in no way more efficacious or expeditious than by cross-strapping and the starch bandage.

Dr. Powell mentioned two methods of treating ulcers of the leg: one by transplantation of the skin; the other by half-inch incisions, at intervals, around the entire ulcer. It would not be sufficient merely to remove and use epithelial scales—actual integument was needed. A piece the sixteenth of a square inch would suffice to make a dozen insertions, each of which would make a centre for granulations which would cover about an inch. Upon the coalescence of these islands of healthy skin, the ulcer would be healed. Little cuts should be made in the floor of the ulcer, and a piece of sound skin inserted.

Dr. Hollister adverted to a method formerly used by Dr. Brainard, that of placing upon the ulcer a piece of lint sprinkled with a little iodine.

Dr. Hyde had had good results in cases of ulcers from indolent buboes in the employment, after the above method, of bromine.

Dr. P. S. Hayes said that in one of the preparations of ergot, acetic acid was used, about one per cent. being added to the officinal fluid extract, which rendered the liquid preparation more permanent; the acid has the effect

of removing all inert matter. Ergotine is not a simple body like the morphia sulphate.

Dr. Powell, in a case of double popliteal aneurism, had employed hypodermic injections of ergotine upwards of five weeks with no good results—one of the tumors even enlarged.

Dr. Etheridge remarked that in treating the varicose veins the injections of ergotine would be useless unless made near the varix. The local inflammation produced by the irritating alcohol might be sufficient to diminish the tumor. He never recommended the alcoholic solution for hypodermic injections; the alcoholic and aqueous solutions have no one effect in common. One grain of the aqueous extract represents one minim; this, properly diluted, may be used for hypodermic injection.

The discussion was continued to a late hour by Drs. Davis, Merriman, Henrotin, and others, accompanied by reports of cases.

THE ALUMNI ASSOCIATION OF THE CHICAGO MEDICAL COLLEGE.

THE Alumni Association of the Chicago Medical College met in the parlors of the Tremont House, March 15th, at 8 p. m.

Dr. F. C. Winslow presided.

A larger number than usual were present. Communications of importance were received from Dr. John M. Woodworth, of the United States Marine Hospital Service; from Dr. John Sundburg, of Galveston, Texas, and from Dr. George H. Fuller, now at Fort Hall Agency, Ross Fork, Idaho.

Dr. Wm. E. Quine resigned his position of Necrologist, and Dr. S. A. McWilliams that of Secretary and Treasurer.

Both of these resignations were accepted.

The Committee on Entertainment now announced supper to be ready, and invited all present to partake. This part of the programme was a decided success.

After supper, Professor H. A. Johnson was invited to address the Alumni, which he did in his usual happy and eloquent manner.

The Committee on Nominations made the following report, which was received and adopted: S. A. McWilliams, M.D., President, Class '66, Chicago, Illinois; H. H. Clark, M.D., First Vice-President, Class '70, McGregor, Iowa; H. D. Ensign, M.D., Second Vice-President, Class '75, of Chicago Marine Hospital; M. P. Hatfield, M.D., Necrologist, Class '72, 1604 State street, Chicago, Ill.; D. A. K. Steele, M.D., Secretary and Treasurer, Class '73, 883 State street, Chicago, Ill., to whom all communications should be addressed.

The Committee on Entertainment for the ensuing year are as follows: The President and Secretary, with Drs. Bond, Earle, and Hutchinson.

It is to be hoped that our Alumni will present at our next annual meeting many scientific and valuable papers.

S. A. McWILLIAMS.
125 Eighteenth street, Chicago.

Miscellaneous.

AMERICAN MEDICAL ASSOCIATION.

THE Twenty-sixth Annual Session will be held in the city of Louisville, Ky., on Tuesday, May 4th, 1875, at 11 A. M.

"The Delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

"Each State, County and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

"The Chairmen of the several sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. * * *"—*By-Laws, Art. II., Sec.* 4.

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology: Dr. Austin Flint, Sr., New York, N. Y., *Chairman*; Dr. J. K. Bartlett, Milwaukee, Wis., *Secretary*.

Special Committees appointed to report to this Section:

On Meteorological Observations: Dr. J. M. Toner, D. C., *Chairman;* Dr. J. J. Woodward, U. S. A.; Dr. E. Lloyd Howard, Md.

On Clinical Observations: Dr. N. S. Davis, Ill., *Chairman;* Dr. H. A. Johnson, Ill.; Dr. J. B. Johnson, Mo.

Obstetrics and Diseases of Women and Children: Dr. W. H. Byford, Chicago, Ill., *Chairman;* Dr. S. C. Busey, Washington, D. C., *Secretary*.

Special Committees to prepare business for this Section:

Dr. M. A. Pallen, N. Y., *Chairman;* Dr. L. F. Warner, Mass.; Dr. J. K. Bartlett, Wis.

Committees appointed by the above:

On Unusual Fœtal Presentation: Dr. J. A. Octerloney, Ky.

On Retroversion of the Uterus in the first five months of Pregnancy: Dr. Heaton, Mich.

On the Connection of the Hepatic Circulation with Uterine Hyperæmias, Fluxions, Congestions, and Inflammations: Dr. L. F. Warner, Mass.

On the Relation of Menstruation during Lactation: Dr. S. C. Busey, D. C.

Surgery and Anatomy: Dr. E. M. Moore, Rochester, N. Y., *Chairman;* Dr. T. S. Latimer, Baltimore, Md., *Secretary*.

Committee to report to this Section:

On the Treatment of Fractures: Dr. Lewis Sayre, New York, *Chairman*.

Medical Jurisprudence, Chemistry, and Psychology: Dr. Jerome Cochran, Mobile, Ala., *Chairman;* Dr. G. A. Moses, St. Louis, Mo., *Secretary*.

State Medicine and Public Hygiene: Dr. H. I. Bowditch, Boston, Mass., *Chairman;* Dr. H. B. Baker, Lansing, Mich., *Secretary*.

Committees to report to this Section:

On Ventilation of Dwellings, School Houses, and other Public Buildings: Dr. R. C. Kedzie, Mich., *Chairman;* Dr. A. B. Stuart, Minn.; Dr. R. J. O'Sullivan, N. Y.

On Form of Bill to Establish a National Department of Public Health at Washington: Dr. H. B. Baker, Mich., *Chairman;* Dr. H. A. Johnson, Ill.; Dr. J. M. Toner, D. C.

On what Legislative Action, if any, can be taken to Enforce by Law an Examination of all Persons who enter upon the Practice of Medicine and Surgery, by a State Board of Medical Examiners: Dr. Foster Pratt, Mich., *Chairman;* Dr. S. G. Armor, N. Y.; Dr. D. W. Yandell, Ky.

☞ "Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and give due notice of the same. * * *"—*By-Laws, Art. II., Sec.* 5.

The following Committees are expected to report:

On Cultivation of the Cinchona Tree: Dr. L. J. Deal, Penn., *Chairman.*

On some Diseases Peculiar to Colorado: Dr. John Elsner, Col., *Chairman.*

On American as compared with Foreign Winter Cures: Dr. H. R. Storer, Mass., *Chairman.*

On Railroad Injuries: Dr. W. F. Peck, Iowa, *Chairman.*

On Proper Legislation to Prevent the Spread of Syphilis: Dr. S. D. Gross, Pa., *Chairman.*

On the Use of Pessaries: Dr. John Morris, Md., *Chairman.*

On Cystic Degeneration of the Kidneys: Dr. John A. Octerloney, Ky., *Chairman.*

On the Diseases of Minnesota and the Northwest: Dr. D. W. Hand, Minn., *Chairman.*

On Prize Essays: Dr. John Davies Jackson, Ky., *Chairman.*

On Necrology: Dr. S. C. Chew, Md., *Chairman.*

On Rank of Medical Department of the Army: Dr. J. M. Toner, D. C., *Chairman.*

On International Medical Association: Dr. J. M. Toner, D. C., *Chairman.*

On Memorial on Dr. Henry Miller, deceased: Dr. S. D. Gross, Pa., *Chairman.*

On Memorial on Dr. George Mendenhall, deceased: Dr. J. A. Murphy, Ohio, *Chairman.*

The following amendments to the Plan of Organization are to be acted upon:

By Dr. H. B. Baker, Michigan:

"The officers of the several Sections shall be nominated by the Section in and for which said officers are to serve."

By Dr. Adams Jewett, Ohio:

"The Permanent Members shall consist of all those who have served in the capacity of delegates, and of such other members as shall have received the appointment by unanimous vote, and of all others who, being members in good standing of any State or local medical society entitled to representation in this body, shall, after being vouched for by at least three members, be elected to membership by a vote of three-fourths of the delegates in attendance, and shall continue such so long as they remain in good standing in the body of which they were members when elected to membership in this Association, and comply with the requirements of its By-Laws."

☞ Secretaries of all State Medical Societies that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of the officers, with their post-office addresses, of those County and District Medical Societies entitled to representation in their respective bodies. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates.

It will also enable the Permanent Secretary to present a correct report of the medical organizations in fellowship with the Association.

WM. B. ATKINSON, M.D.,
Permanent Secretary.
PHILADELPHIA, 1400 Pine St.

Book Reviews.

COMPENDIUM OF CHILDREN'S DISEASES, by Dr. Johann Steiner, Professor of the Diseases of Children in the University of Prague, etc. Translated from the second German edition, by Lawson Tait, F. C. R. S. New York: D. Appleton & Co. For sale by Jansen, McClurg & Co., Chicago. 400 pp.

The greater importance given to the study of the diseases of children in Germany, is largely due to the teachings of Henoch, Vogel, Steiner, and Korrmann. The first has enriched the literature of this subject by his excellent translations of West; the others by the compendiums which bear their names. A couple of years or so ago, the Appletons published Dr. Raphael's translation of Vogel's work, and now follow it by this reprint of an English translation of Steiner.

Prof. Steiner's position as physician for fifteen years to the immense Francis Joseph Hospital, has given him rare opportunities for the study of the diseases of infancy and childhood, the results of which he has embodied in this compact and systematic treatise of about four hundred pages. The work is divided into nine sections, which treat, respectively, of the investigation of children's diseases in general; the diseases of the nervous, respiratory, circulatory, and lymphatic systems; the diseases of the digestive, urinary and sexual organs; and diseases of nutrition; zymotic and cutaneous diseases; and lastly, a circular, giving rules for the management of infants, issued by the Birmingham Children's Hospital, with which Mr. Tait is connected. Each disease is taken up in its appropriate place; its nature, symptoms, course, anatomy, causes, diagnosis, prognosis and treatment, being systematically treated in turn. Especial care has been given to the subjects of diagnosis and pathological changes; but we find very little new in the way of treatment, which has been condensed into the smallest possible space, and seems to consist mainly of oxide of zinc, baths, stimulants, and raw beef soaked in wine.

Mr. Tait has given us an easy and faithful translation, whose only fault seems to be the preservation of such words as koprostasis, marantic, necrobrosis, helminthiasis, synostrosis, etc., where simple terms would have been better. His promised notes are also few and far between; but the book, as a whole, is a valuable one, especially as regards diagnosis and pathology, filling an intermediate place between the rather prolix work of Vogel, and the exceedingly condensed compendium of Korrmann.

H.

PRACTICE FOR SALE.

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EDITED BY N. S. DAVIS, M.D., AND F. H. DAVIS, M.D.

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Original Communications.

ELLADONNA VERSUS OPIUM; ADMINISTRATION OF CHLOROFORM DURING SLEEP; UNUSUAL NUMBER OF WORMS.

NOTES FROM PRACTICE. BY J. SCHNECK, M.D., MT. CARMEL, ILL.

[N his valuable paper in the EXAMINER of February 15th, 1874, n "The Antagonistic Effects of Beladonna and Opium," Dr. Wardner, fter having examined the literature n the subject, deprecates the fact that hose cases in which the results have een unfavorable, have not been pubished. He has been able to find ut one reported case (that of Dr. J. . Chesney) of opium-poisoning, in vhich belladonna was given as an ntidote, that has terminated unfavorbly, the subject in this case being an nfant.

However, in the same number of he EXAMINER, under the head of Transactions of the Chicago Society f Physicians and Surgeons," are two ther fatal cases of opium-poisoning eported in which belladonna was iven, one by Dr. Etheridge, and anther by Dr. Wilder. In both cases he antidote was given until the physiological effect (dilatation of the pupils) was produced.

The following case, it is thought, will be of interest in this connection, as adding a fourth fatal case :

BELLADONNA VERSUS OPIUM.

Oct. 9, 1871, at 5 p. m., was called to see W. G——, physician, aged near forty years; of nervous temperament; had for years been an immoderate user of alcoholic stimulants. Upon my arrival at his office (less than a square's distance from my own), found him in profound coma, breathing stertorously, deeply suffused condition of the skin, pupils very small, sensibility almost entirely gone, consciousness rapidly failing, but, after severe shaking and loud talking, aroused him sufficiently to tell me indistinctly, "I have taken thirty grains of morphine; I did it on purpose; I knew what I was doing." A note was found on his table containing a similar statement,

where were also found an empty morphine bottle and a goblet. Consciousness and sensibility now rapidly disappeared. From what I can learn from his brother, the poison had not been taken over thirty minutes when I first saw him. After all efforts to produce vomiting had failed, galvanism, artificial respiration, stimulants, rubefacients, etc., were diligently applied. In addition, hypodermic injections of atropiæ sulphas were given at intervals of thirty minutes, until full dilatation of the pupils was produced, which effect was produced by about 7 p. m., two hours after he was first seen, three injections having been given. This effect was kept up during the next seventeen hours by two subsequent injections, the total amount of atropia given being about one and one-half grains. During the time from the eighth to the tenth hours after the poison was taken, there appeared to be improvement, sensibility and consciousness partially returning, but not sufficiently for conversation. After this time he again grew worse, and at 12 m., Oct. 10th, he died, nineteen hours after the morphine was taken. Although the atropia in this case did not save life, yet I think the improvement during the time from the eighth to the tenth hours is plainly to be accredited to it.

ADMINISTRATION OF CHLOROFORM DURING SLEEP.

April 28th, 1873, was called to see J. W——, a rugged-framed but anæmic boy of five years. Examination revealed a large polypus of the vesicular variety in the left naris. Upon making an attempt to extract it, he became so badly frightened that I had to desist. Called the next morning at six o'clock, and found hi asleep. I rolled a handkerchief int the shape of a bird's nest, in which poured about one drachm of chlor form; this was at first held about si inches from the mouth and graduall brought nearer until total anæsthes was produced. I now extracted th polypus, and did not even appear t disturb him of his sleep.

UNUSUAL NUMBER OF WORMS.

Was called Feb. 13th, 1875, to s R. W——, a healthy farmer boy fou teen years old, slender form. W given the following history: He ha been attending school during the pa three months; when out of schoo had been doing such work as is usuall done on a farm during the winter se son; that he had during this time fe well; had been working hard all th day until about 5 p. m., when he w attacked with pain in the bowel nausea, and finally vomiting. I sa him at 8 p. m., and found him som easier, but still complaining of pai in the abdomen, which, on examina tion, I found to be very hard and ur even to the touch. Otherwise coul detect nothing wrong. Left him seve powders, each consisting of two grai each of santonin and calomel; fou to be given this evening, one ever two hours; at 6 the next morning full dose of castor oil. The remair ing three powders to be given tw days afterward in the same way.

Feb. 18th. Heard from my patie to-day, and he is reported by h father, a man of undoubted veracit to have passed 188 round worms (a caris lumbricordes), all of good siz The patient says: "I am feeling a well as usual, and feel as if I w much taller."

THE RECURRENCE OF MEASLES.

By James I. Tucker, A.M., M.D., Chicago.

THE epidemic of measles prevailing at the present time, of which Chicago comes in for her full share, affords an opportunity to observe the disease in many of its phases. Among these phases is its recurrency. It has been my privilege to attend a number of cases, and I have been surprised at the frequency with which I have been told (when, upon hearing the irritative cough, I have expressed my suspicions of measles) that this could not be the case, as the patient had already had them. But in every instance my suspicions have been confirmed. I make due allowance for the inaccuracy of the laity in matters of this kind, and recognize the possibility of mistakes on the part of medical men, but now and then a case occurs in the experience of individual practitioners, which so fully confirms the observation of others that it comes with the force of conviction.

Such a case is that of Carrie S——, aged ten years, whom I treated for measles in July, 1874. This was in every respect a typical case, in its prodromes, preliminary stage and exanthem. I am attending the same girl, who is now, March 23, 1875, abed with measles, this case differing from the other in no essential particular, the temperature in both cases rising to 103.2° F.

Instances of this kind are perhaps only worthy of mention, because the best authorities differ with regard to the possibility of a recurrence of measles. Even Rosenstein and Willan, who had the most ample opportunities, and devoted the closest attention to eruptive disease, state that they have never seen a case—at least one attended by fever. Probably second attacks are very rare, and differ in different epidemics, in this respect to be classified with variola, varicella, scarlatina, etc. Doubtless many cases are simply a re-appearance of the eruption after a temporary suppression. But if all cases were recorded, wherein occur two outbreaks in a single patient, at intervals of months or years, under the eye of a single practitioner, it might be found that such occurrences are more frequent than is generally supposed, and thus their authenticity established beyond a doubt.

Third attacks are probably very infrequent, but sometimes occur, as in Van Dievan's case (recorded Ziemssen, vol. 11, p. 43).

AN INTERESTING SURGICAL CASE.

Reported by H. W. Sawtelle, M.D., of the Marine Hospital Service.

PRIVATE George T. Cottrell, Co. G, 1st U. S. Sharpshooters, aged 21 years, was wounded while in the act of firing his piece, at the battle of Chancellorsville, Va., May 2, 1863, by a crusidal ball entering about half an inch above left clavicle, and about one inch from its sternal extremity,

and passing transversely between the trachea and œsophagus, lodged beneath the clavicle near the point where the subclavian emerges. He was conveyed to Washington, D. C., and admitted to St. Aloysius Hospital May 7th, 1863.

There was but little blood lost. A numb pain supervened, which lasted six months, referred particularly to the elbow joint and fingers, the fingers remaining semi-flexed three months. He was unable to speak aloud for two weeks, and nourishment could only be taken in liquid form through a tube for several weeks. The forearm was carried at right angles, and narcotics were exhibited to relieve pain. By the middle of July following, the wound had perfectly healed, and never re-opened. At this date the joint, which had become firmly fixed at right angles from inaction, was straightened while the patient was under the influence of chloroform, and frequent flexion and extension subsequently restored fully the use of the joint.

He was returned to duty, in the Veteran Reserve Corps, Oct. 31, 1863, from whence he was discharged from the service Sept. 14, 1864, and pensioned.

The hand and fingers continued t be very sensitive to cold and hea and at times intensely painful.

One morning in the fall of 1865, h found that the power of supportin the head was lost to such an extent that he was unable to rise from hi bed, and clonic contractions, drawin the head to the right shoulder, laste four days, but did not recur.

Late in December, 1869, the pai at the point of lodgement of the mis sile increased, and January 31st, 187c Professor N. S. Lincoln, M.D., havin placed the patient under the influenc of chloroform, cut down and remove the ball, which was found thrust i between the subclavian and a branc of the brachial plexus, the missil resting on the artery just where i emerges from beneath the clavicle with the nerve drawn tightly acros the ball in front. Upon pushing aside this nerve in order to remove the ball vigorous contraction of the limb en sued. The wound healed readily.

The limb is now equal to its fellow in size and strength, and with the ex ception of a very slight sensitiveness of the fingers to cold and heat, whic is improving, the patient is entirely relieved of his suffering.

ANTI-PYRETIC TREATMENT OF ACUTE RHEUMATISM.—The Mount Sinai hospital has adopted the treatment of acute rheumatism by the use of cold externally applied. The method consists in the use of cold baths, combined with ice-bags, to the inflamed joints. Every patient does not bear well the cold baths, but the ice-bags always prove grateful and always remove the pain. The very curious point has been noticed, that if blankets are placed over the patient, or in any way the patient be allowed to sweat, the cold loses its efficacy. It is found also that, if the ice-bags are removed from the inflamed joints, the pain sometimes re-appears, and, when it does, a return to the ice-bags again relieves the patient.

Translations.

RECENT PROGRESS OF OPHTHALMOLOGY IN FRANCE.

By Fred. J. Huse, M.D.

I. The Pupil as a Guide During Administration of Chloroform. II. The Ophthalmoscope as a Means of Diagnosis in Acute Phthisis. III. Cystic Degeneration of Conjunctival Mucous Glands.

I.

M. BUDIN made, in behalf of M. Coyne and himself, a second communication to the Society of Biology in Paris, at the session of Feb. 6th of the present year, upon the pupillary phenomena in asphyxia, and upon the difference between these phenomena in the anæsthesia from chloroform and in the anæsthesia from asphyxia.

He proceeded to state that ever since the first appearance of etherization, the subject of asphyxia has been agitated; respecting this, it was sufficient to refer to the works of MM. Sedillot, Faure, Vulpian, P. Bert and Claude Bernard. That there are manifest in the pupil differences between anæsthesia from chloroform and anæsthesia from asphyxia, he and his colleague were prepared to demonstrate. In the former condition, when it was total, it may be observed that there is contraction with immobility of the pupil. In asphyxia, on the contrary, there is at first a condition of the pupil intermediate between dilatation and contraction, then a very wide dilatation at the time of the appearance of the convulsive phenomena.

When the anæsthesia is attained, excitations fail to produce any modification of the state of the pupil. These phenomena may readily be observed by introducing into the trachea of a dog a canula furnished with a stop-cock, so that the administration of the anæsthetic may be exactly regulated according to the wish of the experimenter.

M. Schiff, however, as well as MM. Bert and Moreau, called in question the result of the experiments already briefly published in this journal.* In giving chloroform to dogs, he had very readily caused their death without having produced pupillary contraction. With chloral, M. Schiff had obtained, it is true, consequent upon an intravenous injection, a contraction of the pupil with total anæsthesia; but when, by means of a sack, he gave chloroform to the animal thus chloralized, he observed re-appearance of the dilatation of the pupil. Chloral, according to his opinion, differed in its action from chloroform; chloroform, moreover, failed in his observations to produce contraction and immobility of the pupil.

MM. Budin and Coyne demonstrated in the following manner that

*Medical Examiner, vol. XV., page 542, and *Chicago Journal of Nervous and Mental Disease*, vol. II., No. 1.

M. Schiff, by administering chloroform by means of the sack, produced in reality not anæsthesia, but asphyxia:

They first injected into the veins of some dogs nearly half a drachm of chloral, sufficient to maintain total anæsthesia during fifteen minutes or more. When each animal was completely anæsthetized they caused him to breathe chloroform vapor freely in the open air; nevertheless, the pupil remained throughout the duration of the experiment (an hour), very firmly contracted and immobile.

Having then performed tracheotomy, they inserted into the trachea of a dog a canula provided with a stop-cock, and when, 45 grains of chloral having been injected, total anæsthesia, accompanied with a contraction of the pupil that became punctiform, appeared, they closed the stop-cock. Asphyxia supervened, and with it a progressive dilatation of the pupils, which at length were very large. Upon opening the stop-cock, the pupils returned to their previous condition; again closing it, they dilated as before.

Thus, *without chloroform*, and with *pure asphyxia*, they reproduced the observations of M. Schiff. Very probably it is owing to some similar defect in the operatory process that contradictory results have been obtained by certain oculists, and by Youngken and M. Maurice Perrin.

As M. Claude Bernard has clearly shown, when the administration of chloroform is mismanaged at the outset, there is a mixture of true anæsthesia and asphyxic anæsthesia. Otherwise, neither chloroform nor ether act as asphyxiants, their vapors exerting upon the nerve centres a direct medicinal influence. All these and many others of the observations of that eminent physiologist of the College of France are confirmed by the experiments of MM. Budin and Coyne.

These authors, however, are far from claiming that asphyxia is the most frequent cause of death in the administration of chloroform and ether; these causes are multiplex, and among them, as MM. Perrin and Lallemand have demonstrated, the most noteworthy, on account of frequence, is syncope.

Asphyxia usually appears in connection with anæsthesia under certain special conditions in the method of administration of these anæsthetics. With other anæsthetics, however, this will not hold true, since it is asserted by MM. Jolyet, Blanche and Claude Bernard (for denial see reports of the session of the Surgical Society of Paris held 3d March, 1875) that nitrous oxide acts invariably as an asphyxiant. It appears that such also is the case with the nitrite of amyl, as M. Bourneville has observed the same pupillary phenomena which appear in simple asphyxia.

In brief, anæsthesia attended with asphyxia causes pupillary phenomena distinctly different from those of simple anæsthesia from chloroform. It is highly important (Sedillot, Claude Bernard) to avoid asphyxia during the administration of chloroform.

Fnally, if in the careful maintenance of anæsthesia with chloroform there appears during the stage of complete insensibility a state of average dilatation, or indeed of any dilatation of the pupil, in place of the usual contraction, the surgeon should at once assure himself whether any cause of asphyxia is influencing the anæs-

thesia.—*Progres Medical*, No. 7, Feb. 13, 1875.

II.

M. Bouchut recently had, in a case of acute phthisis, simulating typhoid fever, a striking verification of the usefulness of the ophthalmoscope as a means of medical diagnosis, in the advocacy of which he has been one of the earliest and most prominent of the French school, and concerning which his recent communications merit careful attention.*

The case, which is reported in detail† by an interne of the hospital, was that of a girl aged 13 years, who, two weeks before her entry into the hospital, was suddenly seized with a violent pain in the left side, the sense of oppression produced being so intense that two days before her entry she had several attacks of suffocation. There was some headache; a lack of appetite; no diarrhœa or vomiting.

At the time of her admission the most prominent appearance was that of general typhoid condition, with dyspnœa. Obliged to maintain an upright posture, she was breathing painfully at the rate of 70 respirations per minute. The features bore a most manifest expression of extreme debility, there being notable emaciation of the entire body. General hyperæsthesia existed, which was slightly diminished over the thorax—a symptom which was persistent, and upon which special stress is placed in the review of the case—the child crying out at the least pressure upon any portion of its body. The frontal headache caused few complaints. The mind was clear, responses to questions being correct and without hesitation. There was no trouble of the urinary organs. The cardiac sounds appeared normal.

The left anterior wall of the chest yielded upon percussion a slightly more obscure resonance than that of the opposite side, while its elasticity seemed also diminished. In front and on the right side the elasticity and sonorousness were quite normal. Auscultation on the left side revealed, just under the clavicle, a slight, fine sub-crepitant rale; during forcible inspirations and after attacks of coughing, there were some puffs of distant sub-crepitant rales. To the right and in front the vesicular murmur possessed its normal degree. Behind, on the left the respiration was distinct and without any pathological indication; on the right the unfolding of the alveoli was less distinct, the expiration appeared somewhat *soufflante*, and sometimes sub-crepitant rales could be distinguished. The resonance was normal over the entire back of the chest; voice unchanged; temperature 103°; pulse 140. The pupils were dilated and their susceptibility to light was impaired. There was no complaint of any impairment of vision.

Such were some of the more prominent symptoms of a case which was at first diagnosed by M. Bouchut himself as a double pneumonia of a bastard, unusual form. The following day, diarrhœa having set in, there was fresh hesitation and an opinion of its being typhoid fever of a thoracic variety; but the local symptoms were so widely at variance with the general condition, that on the third day M. Bouchut proceeded to make an ophthalmoscopic examination. The pres-

* Medical Examiner, Jan. 15, 1875. *Medical Times and Gazette*, Jan. 23, 1875. *N. Y. Medical Record*, March 27, 1875.

† *Progres Medical*, Feb. 27, 1875.

ence of several tubercules upon both choroids was readily observed by means of the ophthalmoscope, thus affording the indisputable diagnosis of miliary tuberculosis.

Subsequently the thoracic symptoms increased, the rales became more and more marked in intensity as well as extent, and fifteen days after admission the patient succumbed.

At the autopsy, the lungs were found to be *crammed* with the small miliary granules; scarcely a dozen, however, could be found on the peritoneum and intestines, though the mucous membrane, especially of the small intestine, was congested. There were about twenty granulations on the pia mater, and in the left sylvian fissure several were united in a small purulent collection of the size of a pea.

The eyes were divided perpendicularly to their antero-posterior diameter, and disclosed a normal condition of the refracting *media*. Upon carefully raising the retina, the choroidal pigment was found intact, and on each side of the optic nerves there were some whitish, opaque and slightly protuberant points of the size of the head of a small pin. In the right eye there were three of these very near the nerve, and three others at a slight distance. In the left eye there were two in the vicinity of the nerve, and eight others disseminated over the choroid.

While it may perhaps be too much to say, with Cohnheim,* that in miliary tuberculosis the choroid invariably contains tuberculous deposits, still, on the other hand, there is reason to believe, according to M. Bouchut, that such a condition exists more frequently than is generally thought to be the case, and in such a disease as acute phthisis its discovery is of the greatest importance to all parties concerned.

Berliner Klin. Wochenschr. No. 6, 1867.

III.

An interesting case of cystic degeneration of the mucous glands of the conjunctiva has recently been described by Dr. Carlo de Vicentiis, in which the conjunctiva presented yellowish irregular nodules upon its tarsal portion of the size of the head of a very small pin, only slightly prominent beyond the general level of the mucous membrane. These nodules were more abundant upon the upper lid than upon the lower, and in the interspaces the conjunctiva was thickened, and also smooth and shining.

A vertical section made through this conjunctiva, after hardening it in alcohol, disclosed, under examination by the microscope, numerous cavities, which were even recognizable with ease by the naked eye, and of which some of the smaller were aggregated together in groups, while others of larger size were isolated. Only a small proportion of them were furnished with an excretory conduit. Their walls were irregular, constituted of fibrous tissue, and they possessed cavities containing the degenerated products of secretion. These contents were composed of granular material and a substance which occurred in yellow scales. The granules were most abundant in the large cavities, while in the smaller ones the scales preponderated.

Dr. Vicentiis considers these cavities as conjunctival mucous glands or glandular cells that have undergone a considerable dilatation and present three stages of degeneration: the

first, that found in the smallest, still filled with epithelium intact; the second in those of medium size, containing altered epithelium in the form of scales, and finally the granular detritus found in the largest ones.*

*See, however, *Diseases of the Eye*, by Soelberg Wells, 1870, pages 48 to 51.

This lesion is attributed by the author to the retention of the products of secretion, either on account of too much secretory activity or by reason of obstruction of the excretory conduits.—*Movimento Medico-Chirugico di Napoli*, and *La France Medicale*, 13th March, 1875.

THE INNERVATION OF THE HEART AND THE CARDIAC MEDICAMENTS.

By Professor G. See.

Translated from La France Medicale, 1874, *Nos.* 39, 43 *and* 57, *by H. M. Bannister, M. D.*

THERE is no subject at once more interesting and more complex than that of the innervation of the heart. This study, difficult as it may appear to you, is yet absolutely necessary, in order that you may understand the importance and the mode of action of the agents which I have called the cardiac medicaments.

As regards its structure, the heart is a striated muscle, but it differs from the other muscles of the life of relation in the fact that it possesses in its substance its own centres of innervation and of action. This peculiar character merits a special study of the medicines that affect it, and only this consideration justifies the autonomy of the therapeutic group of which I propose to treat.

As a muscle, that is, as a motor organ, the heart is controlled by two principal groups of medicines, namely:

1. Those which paralyze the motor nerves (curare, calabar bean, hemlock, aconite).

2. Those which paralyze the muscular system (salts of potash, veratria).

3. Farther, the heart possesses a system of irrigating canals which do not play a merely passive part. The vessels of the heart itself, the coronary arteries, possess an active attribute, that of contractility, which itself is under the control of the vaso-motor nervous system; therefore, any agent exercising a paralyzing influence on the vascular nerves may modify in a special manner the central organ of the circulation. Therefore, a third group of agents, the vascular medicines (belladonna, bromide of potassium, ergot, nicotine, etc.), may be considered as indirectly acting upon the heart itself.

4. Finally, there exists a last group of agents which appear to have an elective action on the heart, and which, for this reason, merit the title of direct or true cardiac medicaments, that I have given them.

Before studying the mode of action of this latter class, I think it may be advantageous to review the general subject of the physiology of the heart in regard to those points on which we have the most concise and positive information.

The innervation of the heart comprehends three centres of action:

1. The first of these is situated in the heart itself and constitutes its *automotor centre* or autonome. It is formed by little nervous ganglia situated in the sinus of the vena cava and in the walls of the left ventricle.

These ganglia contain in themselves

the whole motor principle of the heart. There are those who have, in recent times, gone so far as to deny absolutely any other motor. Legallois was the first, at the beginning of the present century, to give out the opinion that the spinal cord might act upon the heart, and that there should be for this organ other auxiliary nervous centres. The means employed by Legallois to demonstrate the existence of these auxiliary centres were very primitive. His theory was, nevertheless, the correct one, notwithstanding the fact that Magendie and Claude Bernard disputed it. It belonged to a young German physiologist, Von Bezold, to place beyond any doubt the facts suggested by Legallois, and to demonstrate in an irrefutable manner the action which the cord exercises upon the heart. Von Bezold, in his beautiful experiments on the cardiac poisons, divided the nerves which go to the heart and preserved only a filament, starting from the grand sympathetic between the two thoracic ganglia; he observed:

1. That the pulsations of the heart became much less frequent.

2. That the vascular tension became greater.

3. That the issue of the blood from the arteries became more abundant and more forcible.

The cord, therefore, contains an auxiliary centre of action exercising its influence on the heart. But, by what way does the cord act on the heart? Nervous fibres leave the cord, passing by way of the thoracic nerve, according to some, by the pneumogastric, according to others.

Outside of this auxiliary spinal centre, there exists still another that acts indirectly on the heart—the *vasculo-motor* or *vasculo-nervous* centre. The vaso-motor nerves leave the spinal axis with the motor roots of the second cervical pair, and apparently have their origin in the upper part of the cord, and probably in the medulla. When this centre is affected it produces, as it were, a vascular paresis, characterized by a dilatation of the vessels and a lowering of the arterial tension. Thiry and Ludwig, in cutting the thoracic nerve, have observed the same phenomenon that Von Bezold noted in his experiment. After the section of the cord and of the cervical sympathetic, they noticed a notable lowering of the arterial pressure, and a diminution in the number of the pulsations. This last result, although contrary to the assertions of Professor Marey, ought to be considered as real and well-founded.

From these short physiological premises it results, therefore, that there are three cardiac centres of action:

a. An automotor centre (intracardiac ganglia).

b. An auxiliary spinal centre (spinal cord).

c. An indirect centre (vaso-motor nerves).

But these three centres are not alone sufficient to produce the regular play of this organ. There is still needed, in order to insure its marvelous harmony, a regulating agent, a sort of moderator that can prevent the troublesome effects of the influences we call moral, which singularly modify the contractions of the heart.

This regulator is the pneumogastric nerve, which seems to act in opposition to all the other nerves. In fact, we know that when we divide a motor nerve we immediately paralyze the muscles to which it goes, but when we cut the pneumogastric nerve we accelerate, as it were, the pulsations of the heart, instead of causing them to cease. The same nerve, when excited, instead of augmenting the action of the cardiac muscles, has the effect, on the contrary, to suspend its action.

The pneumogastric dominates, so to speak, over all the innervation of the heart; it is more powerful than the automotor centres; it governs, directs, arrests or counteracts them. The whole is subjected to its control; it is a ruler, a despot; or rather, it plays the same part as the curb or governor in the steam engine, as I have, following this analogy, already proposed for it the designation of governor of the heart, a name uni-

versally adopted at the present day. This depressing, or rather, suspensive action of the pneumogastric, admitted by the majority of physiologists, has nevertheless been denied by Prof. Schiff, and more recently by M. Onimus. Both refuse to admit the action of the vagus as a nerve of arrest, without denying altogether the retardation of the heart produced by the excitation of this nerve; but they seek to explain this effect, the one by the intensity of the excitation of the currents employed, the other by the action of related currents.

Besides the pneumogastric nerve, there is a second system of arrest, situated in the heart itself. There is, in fact, in that organ a nervous ganglia acting in a directly contrary manner to the others (the automotor centres), that I mentioned before. The physiological action of this inhibitory ganglion has been recently revealed to us by the singular properties of a new agent, studied by M. Prevost, of Geneva; I refer to muscarine. When the heart of an animal is taken from the chest, as is well known, it continues to pulsate for a few seconds, although separated from its nerves and nervous centres, on account of the nerve power it receives from its little inherent and automotor ganglia. But muscarine arrests the movements of the heart, when thus taken from the chest and still palpitating. This effect can only be explained by the action that muscarine exercises on the centre of arrest situated in the heart itself.

What is the connection between this intracardiac centre of arrest with the pneumogastric? In the actual condition of science it is difficult to answer this query, and it seems to us advisable, notwithstanding the ingenious hypotheses that have been proposed, to leave the question still in suspense.

The two systems of arrest I have described are not the only ones that control the heart; there is, in addition, an intimate correlation between the contractions of this organ and the cardiac circulation itself. It appears that everything connected with the heart has its centres of action and of arrest.

The vaso-motor system of the heart is provided with a special nerve, discovered by Ludwig and the brothers Cyon. This discovery obtained for the two last named physiologists the grand prize in experimental physiology decreed by the Academy of Sciences in 1867. The nerve of Cyon ordinarily rises by one root from the trunk of the pneumogastric, and the other from the superior laryngeal. It is separate in the rabbit and the dog, but in man is included with the trunk of the vagus nerve.

Starting from its origin in the upper part of the neck, the nerve of Cyon descends along the carotid artery by the side of the cervical filament of the sympathetic, which it accompanies without uniting with it. Reaching the chest, it anastomoses with fibres from the first thoracic ganglion, and is soon lost in the substance of the heart, or better in the dense cellular tissue situated between the origins of the aorta and the pulmonary artery.

Such, in a few words, is the anatomical description of this singular nerve which plays so important a part in the circulation by its reflex action on the motor nerves of the blood-vessels.

For the purpose of experiment, we expose and divide it in the middle portion of the neck. While the electric excitation of the peripheral portion of the divided nerve produces no pain and has no effect on the manometric pressure or on the heart, the excitation of its superior and central portion is painful and causes a depression of five or six centimetres in the manometer applied to the carotid —in a word, an enormous diminution of pressure in all the vessels. The mechanism of this reflex action on the blood pressure is shown in first paralyzing the muscular system with curare and then cutting all the nerves that go to the heart. The lowering of the pressure remaining, in this case, the same, renders it certain that it is not through the muscular system nor

through the heart that it is brought about. But if we perform the section of the splanchnic vaso-motor nerves, this vascular depression fails to appear, and therefore we have the secret of its mechanism. The excitation of this sensitive cardiac nerve reacts, therefore, exclusively on the vaso-motor nerves, producing a repletion of the heart and a diminution of the blood pressure. To the direct paralyzing influence of the pneumogastric on the heart is added also a paralyzing reflex influence of the sensitive or depressor nerve of the heart. The nerve of Cyon is therefore a moderator or depressor nerve — a nerve of arrest of the vascular centre.

En resume, there exist three principal centres of action for the heart, and three corresponding antagonistic centres constitute its system of arrest.

1. An automotor centre of action (intra-cardiac ganglia) and an intra-cardiac centre of arrest.

2. An auxiliary medullary centre (spinal cord) and a corresponding nerve of arrest (the pneumogastric nerve).

3. An indirect centre (vasculo-nervous) and a special depressor nerve of the vaso-motor system (nerve of Cyon).

The physiological premises I have just laid down were a needed preface to the study of the cardiac remedies. How, indeed, can we understand the mode of action of a medicine on the heart if we do not know beforehand the functional endowments with which that organ is provided? Would we not be continually exposed to error, if, guided only by a blind empiricism, we were ignorant of the manner in which the medicine we prescribe ought to act? It is not sufficient to know that the drug enfeebles the contractions of the heart and diminishes the frequency of the pulse, we ought yet to know how it produces these effects. Is it the cardiac fibre itself that it acts upon, or rather are the nerves of the heart first influenced by the agent? In this latter case we have still to inquire whether we have produced, for example, an excitation of the nerves of arrest or a paralysis of the automotor centres.

In order to reply to these and like queries, and to answer the questions that every physician, jealous of his art, should propose, the previous study of the mode of action of a medicine is absolutely indispensable, and consequently experimentation, "*in corpore vili*," is needful, and should serve as the basis of the therapeutic application.

But as we advance in this study, new difficulties present themselves before us. The physiological deductions and the experimental results are far from giving us all the elements of so complex a problem. Medicines are like men, and we may apply to them the celebrated saying of Pascal: "There are no two of them that resemble each other. The more we advance, the more are we able to establish the distinctions which separate them and the shades of difference between them." But it is for us to discover, at the same time, the analogies and the differences that present themselves to us in this general study of the cardiac remedies.

There are two kinds of cardiac medicines: the one acts all at once and directly upon the heart; digitalis is the type of this kind. All the effects of this agent are the result of its primal action on the heart. The other kind acts principally on the other organs, and their action on the heart is only consecutive and secondary. These are the indirect cardiac agents; such, for example, are calabar bean, aconite, veratria, etc.

Allow me to say a few words on these two last-named medicines, as regards the special point of view which now occupies our attention.

Aconite, Aconitia.—Aconite had its day of splendor in the last century, in the hands of Stoeck, who recommended its employment in acute articular rheumatism. After his death the remedy fell to the rank of the anti-nervines. It seems even to have almost fallen into oblivion, when more recently, the homœopaths on the one hand, and on the other, Dr. Schroff,

in Germany, the author of a very interesting treatise on pharmacology, brought it again into notice, and physiology itself comes to its aid in securing for it the recognition it deserves.

All the facts concur to show that aconite is a poison to the heart. I pass in silence the various effects produced by it on sensibility and motility, for here we are only concerned with its action on the heart. Administered in a rather large dose, aconite causes a retardation of the cardiac contractions and a diminution in number of the pulse beats. This action is very prompt, and death ensues from failure of the heart, before the lungs are at all affected. But let us attempt to penetrate farther in the study of its action, and first of all we must point out the different results according to the dose employed. When we give aconitia in an almost infinitesimal dose, $\frac{1}{5}$ of a milligramme (= .003 gr.), we observe a very noticeable acceleration of the pulse and the circulation. This preliminary effect is of short duration, for this action of aconite on the centres of excitation of the heart is ephemeral and transient.

As soon as this first phase of excitement has passed, we observe a singular state of fatigue of the heart, which shows itself first by a weakness of the ventricles and then of the auricles. It appears that the heart (pardon the expression) can flap but one wing, and, in fact, it only beats with the auricles, and at last stops, in a sort of tetaniform contraction. One of the factors of the inhibitory system ought to be found super-excited in order to produce this effect. But what is this inhibitory system of the heart? According to what I have said before, the cause must be sought in the pneumogastric nerve or the ganglia at its termination. It is the curb that is over applied, and the arrest takes place; the poison takes effect on the vagus nerve, and the heart undergoes a tetaniform contraction.

The excitation of the suspensive or inhibitory system becomes weaker, and finally ceases, while the convulsive contraction still continues. At the moment when the inhibitory excitement is exhausted, how is it that the heart remains in its, as it were, tetanized state? It is because aconitia is a nervo-muscular poison; it acts not only on the nerves, but on the cardiac muscle itself. We may sum up the phases of aconite poisoning as follows: In the first place we observe an acceleration of the pulsations of the heart, due, without doubt, to an excitation of the automotor centre.

In the second stage, there is a retardation of the pulse and the cardiac contractions, probably produced by an excitation of the nerve of arrest (pneumogastric).

In the last stage, we have arrest in tetanic contraction by exhaustion and paralysis of the suspensory system, and finally inertia of the muscle and paralysis of the intra-cardiac motor system.

Veratria.—Veratria offers some analogies with aconite, but it presents numerous differences as regards the considerable modifications it produces in the arterial pressure. It is in virtue of this special property that it may be considered as one of the most powerful anti-pyretic agents.

We find in this case, as in that of aconitia, a preliminary stage, which is the more pronounced when the veratria has been given in very weak doses. When we give 1 milligramme (= .015 grs.) of veratria, we augment instead of diminishing the peril. In fact, instead of retarding the pulse by the use of a small dose, we only accelerate it. This is a new and striking proof of the importance of this study, and of the difficulties with which it bristles. Therefore, we ought to take special care lest we employ a timorous and dangerous moderation in the choice of the dose we administer; for that which may seem to be an excess of prudence, in reality is only a blind temerity; because the action of veratria in too minute doses may produce the most deplorable results.

Veratria should be employed in the

dose of from six to twelve milligrammes (= .09 to .18 grs.), in order to produce really useful therapeutic effects; that is, a considerable retardation of the contractions of the heart. Little by little, this retardation continues, even until the inhibitory system loses its excitability and its power. The pneumogastric nerve becomes exhausted in its trunk much sooner than in its branches, as the following experiment will prove:

Take an animal, administer to it veratria; we then observe a notable slowing of the pulse; next cut the pneumogastric, and the pulse becomes quickened; excite the peripheral portion of the nerve, and the pulsations again immediately become slower. At last, after a certain time, the heart itself is affected, as we have shown in the case of aconitia, and the irritability of the cardiac fibre itself becomes extinct.

We have stated that veratria exercises a very interesting influence on the vascular pressure: When we give it in the dose of about ten milligrammes, we observe, simultaneously with the enfeeblement of the pulse, a considerable lowering of the blood pressure, a diminution of the contraction of the heart, and a manifest reduction of the temperature.

But if we recall what has been said in regard to the nerve of Cyon, we find an important application of these physiological results. We are aware that if we cut this nerve and irritate its central portion we cause a centripetal excitation that diminishes the pressure throughout the whole arterial system, and in particular in the mesenteric system.

This nerve, therefore, counteracts the working of the vasculo-motor centre. The pneumogastric is a centrifugal, and therefore a motor nerve. The excitation of its peripheral portion corresponds in its effects to the irritation of the central end of the nerve of Cyon.

In all the experiments performed on the pneumogastric, we may note, simultaneously with the slowing of the pulse caused by the excitation of this nerve, a diminution in the vascular pressure; but the synchronism between the two phenomena is not complete and absolute; the sphygmograph shows, in reality, a diminution of the arterial tension previous to the retardation of the pulse; the two phenomena are parallel, but not connected.

However it may be, we find the physiological action of the nerve of Cyon in the effects of veratria on the vascular tension, and see by this how useful the application of experimental physiology may be to the study of the action of drugs.

In a second phase of the action of veratria the lowering of the vascular pressure becomes still more pronounced, and after a certain time the vascular walls present an extreme depressibility; the vessels and the heart itself are so far paralyzed that further excitation is impossible. In this third period the heart is affected, and the individual dies in a state of extreme weakness, of profound collapse, as is observed in certain cases of pneumonia treated with veratria.

We should therefore bear these facts in mind, and not fail whenever we administer this remedy, to attend to auscultation, and to watch with the greatest care the state of the heart and pulse during the whole time we employ this remedy, generally so efficacious, sometimes so dangerous, and always so delicate and difficult to direct.

* * * * * * *

Our attention has so far been particularly given to two of the agents which deserve to be placed in the foremost rank among the indirect cardiac medicaments: aconite and veratria, the one paralyzing the motor nerves of the heart, and the other acting on its muscular fibre. By the side of these we may place curare, calabar bean, hemlock and nicotine in one group, while the salts of potassium should be placed in a second by the side of veratria. All these agents diminish the excitability of the inhibitory system of the heart, but they employ different means to arrive at that result.

1. The one kind paralyze the terminal extremities of the nerves, the pneumogastric in particular (conium, curare); both of these two poisons affect the motor nerves of the life of relation before they act on the heart itself.

2. Others, before suppressing the functions of the organ itself, excite its inhibitory system (first period of nicotine and calabar bean poisoning).

3. Within five years, two experimenters at Dorpat, Dr. Oscar Schmiedeberg and Richard Koppe, have noted the singular effects of a new alkaloid obtained from poisonous mushrooms, and in particular the agaricus muscarius, whence the name muscarine, which they have given to the extract, and which was the subject of a very recent communication to the Societe de Biologie by Dr. Prevost, of Geneva.

This young and talented physiologist has shown that by injecting muscarine into the veins of an animal, we arrest the heart in diastole. The action of this poison is so much the more curious since in such a condition the heart is not dead, and is even not paralyzed, for we can revive its contractions after long hours of inaction. Such an effect can therefore only depend on the irritation of a nerve of arrest. Is it the pneumogastric that is here in action? Evidently not, since the previous section of this nerve, in an animal poisoned with muscarine, does not hinder the effects of the poison. It must, therefore, be the intracardiac centre of arrest itself on which muscarine acts.

Physostigmia, applied to man, causes a more or less considerable retardation of the heart's pulsations; but we do not yet know with certainty its real mode of action. When we act on a muscarinized heart (if I may be excused the expression) with physostigmia, we break in upon the silence of that organ which, before arrested in diastole, now commences to pulsate. We may therefore conclude that physostigmia acts on the heart in manner contrary to that of muscarine. As to conia, it produces an effect upon the heart only very slowly. Indeed, hemlock, in this respect, like curare, paralyzes all the motor nerves before attacking the central organ of the circulation; it is very probable that this poison acts, in causing the stoppage of the heart, by exciting the pneumogastric nerve.

In opposition to these last-named agents, belladonna and its derivative atropia, paralyze the cardiac extremity of the vagus. Their effects are therefore altogether the reverse of the preceding. The acceleration of the heart pulse in this case can only be attributed to a paralysis of the pneumogastric, or of the intracardiac centre of arrest; in a word, this effect is the direct opposite to that of muscarine.

It would be very interesting to pursue this study, and to be able by this physiological method to recognize as many special medicines as there are functions or particular systems in the cardiac organ. Unfortunately, such an analysis is barely sketched, and we cannot present here more than a distant and imperfect outline.

There still remains to be considered an agent the most important, and at the same time the best known. I refer to digitalis. Its history seems altogether exhausted; it appears as if nothing new could be added after the numerous memoirs of which it has been the subject. Nevertheless, all has not been said that may be said on this interesting topic. Many lacunæ remain to be filled, many dark points to be cleared up, many obscurities to be done away with.

We rank digitalis among the direct-acting cardiac agents, but we should bear in mind that its mode of action is none the less very difficult to explain. Two different methods have been followed to resolve this difficult problem.

On the one hand, we may perform the experiments on ourselves in a very simple fashion. The homœopaths first adopted this primitive procedure. The celebrated Hahnemann first of all experimented on chamomilla. He noticed, after the ingestion of this medicine, which, nevertheless, seems

very inoffensive, a feeling of strangulation, of cephalalgia, numbness in the lower limbs, hallucinations, and confused and strange ideas. (There is no doubt but that the experimenter had no need of taking chamomilla in order to experience such effects.) If I mention these first attempts in experiment, it is solely for the purpose of putting others on their guard against similar errors. But it is in this manner that the effects of digitalis have been studied by two patient but fanciful physicians, Sanders and Stadion. Let us see how they have described them. In the first few days that followed the ingestion of the drug, they noted nothing in particular, but about the sixth day nausea and anorexia appeared. From this time on the trial *in anima medicarum*, became, as we can easily understand, very much interfered with. The subjects of the experiment ceasing to eat, excreted no more urea, and the results became false and erroneous.

Stadion and Sanders, after the eleventh day of their experiment, fell into a state of extreme feebleness, which is easily comprehended after so long a period of involuntary fasting. One of them himself assured me that he was so weak as to be unable to maintain an erect position. But let us leave these courageous but mistaken investigators, whom I only mention in order to point out the imperfections of their method.

All those who have made themselves the subjects of their experiments ought to have kept the conditions the same both before and during their investigation; this is where they have failed. A few, however, have sought to ward off this source of error. Voit has carried on a very remarkable series of researches on the effects of foods and medicines, by ascertaining very accurately the state of the ingestions and that of the excretions, both before and during the experiments.

Dr. Mejoin, on his part, has not only weighed the quantity of food ingested in his experiments, but he has also indicated the quality. In taking fifteen hundred grammes of food, we are able to tell just how much carbon and nitrogen it contains.

Voit fixed the amount of the expenditures, that is, the excretions, in order to be able to make out the complete physiological balance, and it is only at that price that he is able to lay down any really scientific conclusions.

In short, all the experiments on digitalis have been made in the most imperfect and coarsest manner. We can see in what respects they are faulty: "The first are altered by the loss of appetite which inevitably ensues a few days after the ingestion of digitalis; while those made by the second method are rendered erroneous from the want of a previous establishment of the exact balance in the organism.

In the presence of these obstacles in the way of experimentation, the imperfections of the methods employed, and the want of exactitude in the results obtained, we may understand the difficulties with which this study is surrounded. I will now try to infuse a little order and light into this chaos.

I. *Effects of digitalis on the heart and blood-vessels.* In addition to the researches of Sanders and Stadion, I ought here to notice the interesting monographs of Bordier, Legroux, and Lelion, among the more important works undertaken in late years on this subject.

Sanders has stated that when he took a moderate dose of digitalis, he observed during the first few days a notable acceleration of the pulse. The fundamental action of the drug followed this initial effect, namely, a retardation of the pulse, but while this retardation existed the slightest cause produced again a quickening.

With a large dose, the retardation appears, says he, in three hours, and attains its maximum at the end of twenty-four hours; if we continue this dose for five or six days, the pulse becomes small, irregular and intermittent. If it is necessary to purchase the slackening of the pulse at the expense of an acceleration that lasts two or three days, we are in danger of making false steps. But

this initial acceleration fortunately has not been noticed by all the observers, and particularly by the young experimenters whose names we have given above. They have obtained the retardation of the pulse at once, and in a very satisfactory manner.

What is the cause of this retardation?

In order to explain it one eminent physiologist has practiced experimenting with an artificial circulatory apparatus, in which the heart was represented by a hollow bulb of india rubber, tubes of the same material taking the place of the vessels. By the aid of this instrument, ingenious no doubt, but assuredly imperfect, he has been enabled, he states, to formulate a very curious law: "When the calibre of the discharging tubes is contracted, the india rubber bulb can empty itself only with difficulty. If, therefore, the heart drives out the blood it contains with difficulty, we ought to find an augmentation of the pressure in the vessels, and reciprocally the increase of the intravascular pressure produces the slowing of the pulse" (Marey). I give this proposition in Prof. Marey's own words, without comment on my own part.

Experiments on Animals. We will now examine the results furnished by physiological experiment. It is necessary that we should exercise a choice in the animals which we would submit to experimentation. Some resist the poisons which are fatal to us; others are violently affected by those which are without effect upon ourselves. With the exception of the Guinea pigs, all the herbivora are resistant to the effects of digitalis, and it is necessary to have recourse to very powerful doses in order to produce appreciable results. On the carnivora, on the other hand, digitalis acts in a very marked manner.

Let us take a small dose of digitalis. I do not speak of digitaline, which differs according to the mode of preparation (Nativelle, Homolle, and Quevenne); the powdered digitalis is the preferable preparation. If, therefore, we inject a small quantity of the infusion into an animal, we observe almost immediately a slowing of the pulse. Increase, then, the dose (five or ten centigrammes of the solution), and we obtain the directly contrary effect, the heart commences to gallop. If you wish to produce this acceleration, you have only to employ the strong dose at first. It is therefore useless to make an algebraic equation with the words digitalis and retardation of the heart. If we inject a decidedly toxic quantity, we arrest the heart in systole. Thus we see that whenever we employ digitalis, we find ourselves, as it were, between two fires: on the one side the acceleration of the pulse, and on the other the arrest of the heart's action through excessive retardation. * * * *

The first effect of digitalis is exercised on a special nervous apparatus, while its later action takes place on the cardiac muscular apparatus itself. By this rule, the different action of the drug, according to the dose employed, should be explained.

We have seen the effects of digitalis as regards the retardation of the pulse, but it yet remains to us to study its effects on the vascular pressure. It is admitted, as a general rule, that digitalis augments the blood pressure, but it seems to me needful to establish here an important distinction: When we administer the medicine in therapeutic doses, the slackening of the pulse and the augmentation of the pressure progress *pari passu;* but if we give a stronger dose we have first an increase of blood pressure, and shortly after a more or less considerable decrease of the same. If, on the other hand, we administer a toxic dose, we obtain a diminution of a quarter or a third in the intra-vascular pressure.

These singular effects of digitalis may be summed up in the following synoptical table:

I. WITH THE SMALL THERAPEUTIC DOSE.

1. Retardation of the pulse.
2. Increase of the intra-vascular pressure.

II. WITH LARGE DOSE.

1. Acceleration of the pulse, which may terminate in a retardation.

2. Decrease of blood pressure, perhaps changing to an increase.

III. WITH A POISONOUS DOSE.

1. Sudden slowing of the heart, which is attacked in its muscular substance.

2. Permanent lowering of the blood pressure.

Digitalis is a singular poison, distinguished from most of the others by what we may call its cumulative action; when the doses rapidly follow each other their effects accumulate. Very few drugs possess like cumulative action. Very small but repeated doses may result in a sudden explosion of its dangerous effects. We insist upon this point, since this drug, at the same time so wonderful and so terrible, ought never to be given without a previous knowledge of these possible results.

There is finally a last point to which it appears useful to give our attention: that is the change in the contractile force of the heart, and in the quality of the pulse. Under the influence of digitalis, while the heart beats slower, its pulsations become more energetic, and perhaps it is the increased force of the contractions that produces the elevation of the blood pressure.

On the other hand, the pulse becomes dicrotous, it beats double, and if we cast our eye on the sphygmographic trace of the radial artery, we perceive that this dicrotism is on the descending line. This descending line only returns to its point of departure every two or three pulsations; in short, it fails to reach it, and we have then two or three ventricular systoles following each other before the heart succeeds in accomplishing one diastole. We find sometimes in the human subject that the pulse becomes double or triple, in a word, polycrotous. We ought to carefully take note of this disturbance in the rhythm of the pulse, as this last phenomenon is very frequent; it is met with even in cases where the digitalis is given in therapeutic doses, and when these relatively insignificant doses are kept up during a certain time.

Inversely, we employ digitalis to cause the disappearance of similar phenomena of arythmy depending on a disease of the heart, and which offer a very striking resemblance to those caused by the drug in a healthy individual.

RELATIONS OF ATMOSPHERIC ELECTRICITY AND OZONE TO DISEASE.—Dr. Geo. M. Beard, *Popular Science Monthly*, in a valuable discussion of the above topic, gives the following practical suggestions:

1. Many nervous and other diseases, and very many nervous sensations, are perceptibly affected by changes in the quantity of electricity and ozone. After eliminating the factors of heat and cold, of moisture and dryness, of carbonic and nitric acid, of oxygen, pure and simple, there remains much that only ozone and electricity can well account for.

2. Not a few sensitive and impressible organizations experience variations of strength and debility of vigor, and malaise, that very well correspond to the variations in atmospheric electricity, or ozone, or both. From 8 to 12 A. M. is the golden time for brain work, and from 4 to 8 P. M. the silver period for all mental labor; during these two periods there is the greatest amount of ozone and electricity in the air.

3. Irregular disturbances in the electrical conditions of the atmosphere in storms, and especially in thunder storms, and in our climate north-east storms unquestionably affect the nervous system of impressible temperaments unpleasantly, and bring on or aggravate neuralgic, rheumatic and other pains, as well as incite mental distress and discouragement. Now, just before thunder storms, atmospheric electricity is apt to be negative.

Editorial Department.

ASSOCIATION OF AMERICAN MEDICAL EDITORS.

THE members of this association, and all others connected editorially with the regular Medical Press of this country, are requested to meet in the parlors of the Galt House, in Louisville, Ky., at 7:30 o'clock, on Monday evening, May 3d, 1875; being the evening previous to the assembling of the American Medical Association. The Association of Medical Editors was formed in New Orleans, in May, 1869, for the cultivation of friendly relations, consultations concerning topics of mutual interest, and the urging of concert of action in the advancement of education, both preliminary and medical.

The proposition for its formation was made by Dr. Theophilus Parvin, of Indianapolis, whose object was to make it the instrument of accomplishing much good. Up to the present time, however, the number of editors present at the several meetings has been so limited as to render it impracticable to carry into execution the original plans of the Association. We hope there will be a larger number of members present at the coming meeting. It is the duty of the President to deliver to the Association an address, and we doubt not the present incumbent of that office, Dr. W. S. Edgar, of St. Louis, will be prepared to discharge that duty on the evening named.

PUBLIC MEDICAL INSTRUCTION.

THE Medical Society of the County of Kings, N. Y., has appointed a standing committee, called the "Committee on Public Instruction." The chief duty enjoined on the committee is set forth in the following paragraph, quoted from the *Medical Record:*

"It is the purpose of the Committee of Public Instruction to communicate useful information on medical subjects to the public through the medium of the press. To this end, it shall obtain, prepare or select suitable papers, which it shall send for publication to such newspapers or periodicals (not medical) as it may select. The writer's name or other means of identification shall not accompany any original (specially-prepared) paper, nor shall the name of the author of any selected article be published when such author is a member of this or any neighboring society."

So far as relates to hygiene and sanitary regulations, such a committee, performing its work judiciously, would be of great benefit to the public in all our cities.

Correspondence.

A LETTER FROM PARIS.

EDITORS MEDICAL EXAMINER: A sufficient time having elapsed since the introduction of Koumys as a remedy in the Paris hospitals, to permit of extended observation, the profession here finds itself in a position to give a verdict upon the use of this "milk champagne" as a therapeutic agent. It has been largely experimented with by MM. Gueneau de Mussy, Gubler, Chauffard, and many others, in their hospital wards, and their researches show that koumys acts as a wonderful renovator of debilitated organisms, whatever may have been the cause of the cachexia, and that its metasyncritic action is very marked.

Though about ninety years ago, John Grieve, an English surgeon in the Russian service, called attention to the marvelous effects of koumys in all chronic diseases, the investigation was not continued, one reason being the difficulty in procuring the milk. But to-day, thanks to chemistry, we find that a mixture of asses' and cows' milk, at a certain stage of fermentation, gives about the same composition and effect.

It is in the treatment of pulmonary phthisis that a great deal of interest centres upon the koumys. The observations have been numerous in this connection, and so many cases are reported of amelioration, in every stage of the disease, that even the most skeptical have to give the subject consideration. In general the effects upon the patient may be formulated as follows: At first, a slight excitement from the alcoholic nature of the drink; this is followed by cessation of the cough, interruption of the night sweats, improvement of appetite, and marked increase in weight. In other words, general and decided improvement, and this within a few days.

To quote two cases will give an idea of the action of koumys as seen here. Dr. Labodie-Lagrave gives an observation in the *Gazette Hebdomadaire* (September, 1874), in which he states that the patient, a girl of sixteen years, was in "the last stage of pulmonary consumption." A fatal termination was expected, but under the use of koumys her strength returned, and her weight increased two kilogrammes in six weeks.

The second case that I will mention is recorded by Dr. Henri Huchard, in the *Union Medicale* for January 26th, 1875. The patient was fifty years of age, and presented the signs of pulmonary tuberculosis in the third stage (cavernous rales, etc.). For more than four months her state had been getting worse. Her weight had decreased thirty pounds. "Every day the fever was consuming her; the poor patient hardly slept, a prey to an incessant cough and to profuse sweatings; hardly any appetite, frequent vomitings, and an abundant diarrhœa had come, within a short time, to steal from the sufferer what little strength she had remaining." He ordered her

one bottle of koumys (Edwards, No. 1) every day, and, the tolerance being soon established, "the sufferer saw her appetite return, her strength increase at the same time that the night sweats, diarrhœa, vomitings, and febrile exacerbations at night disappeared." In two months' time she had gained twelve and one-half pounds in weight, her face was colored, the cough was less frequent, and the lungs showed a real local amelioration. "*This patient was, without doubt, always tuberculous, but she was no longer phthisical.*"

While conversing with M. Gueneau de Mussy on the subject of koumys, he expressed to me the greatest satisfaction with its results in private practice, but regretted that the expense (three francs per bottle) prevented its constant use in the hospitals.

It is rather a discouraging task to attempt to review, in a letter, a work so full of interesting and important facts as is the one entitled, "Lectures on Anæsthetics and Asphyxia," that has lately been published by M. Claude Bernard. The name of the author is in itself a guarantee for the value of the work, and I shall only attempt to call attention to a few observations, even here finding difficulty in making a selection.

These lectures, originally delivered at the College of France during the years 1869 and 1870, have been carefully revised for publication, and have been enriched by the additional experience of M. Bernard during the past four years.

The first ten chapters are devoted to anæsthetics, not limiting the study to those substances generally named anæsthetic, as chloroform and ether, but considering the effect upon the sensitive nerves of warm water, chloral, opium and its alkaloids. The effect of the combined action of morphia and chloroform, in man as well as in the lower animals, is studied at length. It is found that—1st. If an hypodermic injection of the chlorohydrate of morphia is given an animal recovering from the effects of chloroform, the anæsthesia returns; that is, the animal becomes again insensible. 2d. On giving chloroform to an animal previously narcotized by morphia, a much less quantity is required to produce insensibility than ordinarily. Quite a number of cases are quoted where these results have been obtained in men.

In experimenting upon the tolerance of animals for opium, M. Bernard records the following curious experience, that may give a valuable indication for the general practitioner:

Having thoroughly established the tolerance in an animal so that large doses of the narcotic are borne without inconvenience, he found that it needed but a thorough *purgation* to make a new animal; that is to say, to return the animal to his first state of sensibility to the action of the drug.

Giving chloral to an animal under the influence of morphia makes the hypnotic effect more apparent, but the excitability is not diminished as by chloroform. Administering chloroform to an animal chloralized causes the sensibility to entirely disappear. Hence the conclusion that chloral, at least under these circumstances, has an action like that of morphia.

The second part of the work, comprising eight chapters, is given to the study of asphyxia, more particularly that produced by the vapors of char-

coal. The author establishes, by his experiments and investigations, that the asphyxia from this cause results from the poisonment of the red blood corpuscles by the oxide of carbon rather than from the action of the carbonic acid.

To try and indicate the experimental research and carefully considered theories that the author advances on this subject would be but to translate the entire work, a task that others will doubtless perform, so I will finish this hasty notice by giving M. Bernard's outline of treatment for asphyxia, with which he closes the book:

The necessity for removal from the vitiated atmosphere and the value of artificial respiration he fully insists upon; but, in regard to the latter, he deprecates too violent efforts to establish respiration as tending to rupture the lung tissue, already more or less deteriorated following the time of exposure. The results of these ruptures would be sufficient in many cases to cause the death of the patient from secondary disease, as pneumonia, should he recover from the asphyxia. In extreme cases where cauterization may be used, the author mentions the regions over the trunks and branches of the cervico-brachial plexus as the best points of application; for these nerves, remaining longer impressionable, are able to act more directly upon the movements of respiration. The inhalation of pure oxygen and the transfusion of blood give good results practically as well as theoretically, but are generally too difficult of application.

Though but a comparatively short time has passed since this drug was introduced in Paris, Jaborandi (from the Pylocarpus Pinnatus), is now a familiar word in the wards of the hospitals. Its effects are very decidedly sudorific and sialagogue, and M. Gubler, in a recent report before the Society of Therapeutics, mentioned one case where a patient, to whom he gave 4 grammes of this medicament, sweated profusely and excreted "more than a quart (litre) of saliva." Occasionally it causes vomiting, if administered soon after eating, and when its effects are very marked, the patients complain of great thirst. Sometimes there appears tumefaction of the sub-maxillary glands and even a veritable ranula is formed.

M. Gubler sums up the principal indications for this powerful remedy as follows: Outside of anasarca or dropsy from any cause, where jaborandi gives good results, it is found that sub-acute articular rheumatism is greatly benefited by this drug. In bronchitis with asthma, it sometimes produces marvelous effects. In six cases M. Gubler arrested the access of the asthma by its use.

Following the course of new remedies, it is being used in all kinds of diseases, and its reported favorable action in diseases as widely separated as rebellious ophthalmia and polyuria requires the test of wider experience before the truth and limit of its action can be well determined. The subject is receiving a great deal of attention, and many of the medical journals are engaged in discussing the pros and cons of jaborandi. One thing seems sure, and that is that this drug has shown enough favorable action to insure its being received as a regular occupant of the Parisian medicine-chest.

The *Gazette des Hopitaux* has a cus-

om of giving the *conclusions* that are rrived at by different writers, without urdening its pages with the details of ie investigations, referring those who esire to more fully investigate the ubject to the works themselves. Re-arding this as a very happy custom, shall imitate it from time to time. or example:

"Experimental Researches on the Iode of Action of the More Com-ionly-Employed Vomitives," by Dr. . Chouppe (*Arch. de Phys.*). *Conclu-ons.* The mode of action of vomit-es commonly used is not the same r all, and if we examine the phe-omena that precede and follow vom-ing, we will find very great differ-nces. Ipecacuanha and its alkaloid, whatever way they are introduced to the economy, excite vomiting by direct irritation of the terminal points of the pneumogastric nerves in the mucous membrane of the stomach.

Tartar-emetic and apomorphine have double action; they act on the mucous membrane of the stomach, but also directly on the bulb. There is, however, a difference in these two medicaments. The former acts sooner upon the stomach than upon the bulb, while the apomorphine acts more rapidly upon the nerve centres. The best proof that can be given of this is that doses of tartar-emetic, sufficient to cause vomiting, should be greater when this substance is injected into the veins than when introduced into the stomach. With the apomorphine, on the contrary, it is by injecting into the general circulation that the maximum effect is reached.

C. C. MATTESON, M.D.

PARIS, March 10th, 1875.

Gleanings from Our Exchanges.

BIOGRAPHICAL SKETCH OF THE LATE DR. RUSH.

Philadelphia Correspondence of Boston Medical and Surgical Journal, April 1st, 1875.

A MOST interesting biographical sketch of the life of the late Dr. ush, whose brilliant success in medi-ne will not soon be forgotten, was ecently published in one of the daily urnals. It was he who said, "Let y epitaph be, 'He fed fevers.'" or such was his clear-sightedness at, even in the day of starvation iet, he saw how much wiser it was to pply daily fuel to the fires of fever an to allow it to devour the body of is patient. He made enemies by is as well as by other independent nd original modes of treating disease. I think a brief *resume* of this sketch will interest your readers.

Born in a village just out of Philadelphia, in 1745, Rush received his degree of A. B. at Princeton College in 1760, and, although a mere boy, was the peer of any of his fellows in all his collegiate studies. Immediately after completing his collegiate course, he entered upon the study of medicine, and was one of the ten students who attended Dr. Shippen's course of anatomical lectures, the first ever given in this country. Gifted with an investigating mind, Rush studied labo-

riously until 1766, when he sailed for Edinburgh, and, after two years of hard work, received his degree of M. D. from the university of that city. He next gave a year to continental travel, mingling with the most cultivated medical men in Paris and London. At the close of this year he returned to Philadelphia, and began the practice of medicine. At the very early age of twenty-four, he was elected Professor of Chemistry in the College of Philadelphia, and became a frequent contributor to medical and general literature. The present University of Philadelphia was at this time in process of development, lectures having been delivered at irregular intervals for a year. The acquisition of young Rush completed the faculty of the first medical school in the United States. Some fifteen years afterward, the primitive institution was merged into the present university, and Dr. Rush, recognized as one of the most brilliant young physicians of the country, held the position of professor of the institutes of medicine, and of practice, as well as of clinical medicine. He was an exceedingly minute man, garnering with care every floating fact, theory and incident for future use, absorbing everything, forgetting nothing. In 1790, after a practical experience of twenty years, he published his new principles of medicine. His views met with strong opposition. He had great confidence in the lancet, and a lasting faith in the power and utility of calomel, which he termed "the Samson of the materia medica." His opponents accepted the illustration, jocosely remarking, "It has slain its thousands." These powerful agencies, under the skillful control of Dr. Rush, were productive of beneficial results.

In 1793, Philadelphia was terribly stricken by yellow fever. It raged from July to November, creating an average death-rate of forty daily, with a final aggregate of five thousand victims. The city was panic-stricken. During this frightful crisis, Dr. Rush made herculean efforts to subdue the

my, working practically a portion of his time, and devoting the remainder to a thorough scientific analysis of the disease. He visited one hundred and fifty patients weekly, and saved thousands of lives by his original and judicious treatment. His special method of handling the fever, in spite of its success, was bitterly reviled. Journalists, pamphleteers, and scurrilous anonymous writers attacked him with fierce malignity, until the discussion, primarily based on questions of professional skill, sank into petty persecution. He was stigmatized as a murderer, and threatened with expulsion from the city. As Harvey injured his professional prospects by his theories concerning the circulation, and was hooted as a common fool, so did Dr. Rush lose public confidence because he bravely turned his back upon the beaten path to subdue a pestilence heretofore never vanquished. But he moved on calmly and unfalteringly.

On the termination of the fever, a motion to thank the faculty in general, and Dr. Rush in particular, for eminent services during the epidemic, was offered at a large public meeting, but not a man in the audience was bold enough to second it, and it failed.

Dr. Rush finally turned upon one pamphleteer of bitter force and invective, who violently attacked him, and made him pay five thousand dollars for his sport. This was one of many assaults made upon Dr. Rush, but he survived them all, and built up and retained the largest practice in Philadelphia. A few years afterwards a reaction set in, soon after the gift of a gold medal which Rush received in 1805 from the King of Prussia, in recognition of his replies to certain questions touching the treatment of yellow fever. For the same reason the Emperor of Russia sent him a brilliant diamond ring, and the Queen of Etruria a gold medal.

Dr. Rush was a voluminous writer. Out of seven large volumes six were upon medical subjects. His *Medical Inquiries and Observations*, *Diseases of the Mind*, *Medical Tracts*, *Health*, *Temperance and Exercise*, gave him a

high reputation at home and honorable notice abroad. In early life he found time to study politics, not as a selfish partisan, but as an honest, noble-minded citizen. In 1776 he was a member of the celebrated Congress which signed the Declaration of Independence. In 1777 he was appointed physician-general of the military hospitals of the middle department. In 1787 he was a member of the Pennsylvania convention which ratified the Federal constitution. In 1799 President Adams appointed him treasurer of the United States Mint, solely on account of his faultless character and sterling integrity. The office was an unsolicited gift, and he held it fourteen years.

But few cities in Europe, and certainly none in this country, have such a variety of charitable institutions as Philadelphia. No one citizen contributed more to the organization of many of these than did Dr. Rush. In 1785 he planned and organized the Philadelphia Dispensary, the first institution of the kind in America. He was president of the Philadelphia Medical Society; president of the Philadelphia Society for the Abolition of Slavery; founder of the Philadelphia Bible Society; vice-president of the celebrated American Philosophical Society; a strong, practical friend of the temperance cause, and his work, *An Inquiry into the Effects of Ardent Spirits upon the Human Body and Mind*, is full of valuable information. He was a lofty-minded Christian gentleman. His private life was one of unsullied purity, and his public career unsurpassed in its many brilliant developments and practical results for the common good of his country and his fellow-men.

In my next letter I hope to give you some interesting facts concerning Dr. Keen's later experiences in the use of chloral as a preservative agent.

PHILADELPHIA, March 23, 1875.

ON THE MERITS, REAL AND COMPARATIVE, OF AMPUTATIONS IN THE LOWER THIRD OF THE LEG, WITH SUGGESTIONS AS TO THE PROSPECTIVE VALUE OF PERIOSTEAL FLAPS.

From the New York Medical Journal, April, 1875.

DR. Stephen Smith read the paper of the evening on the above subject of which the following is a brief synopsis:

Ambrose Pare, three hundred years ago, related a case of a man who had his foot shot off, and, after it had healed, had the leg amputated five finger-breadths below the knee, on account of the burden it proved to be in walking.

Pare, in commenting on this subject, says: "We must do otherwise if any such thing happens in the arm;" —and thus shows how accurately he appreciated a most important principle in modern surgery, which is as follows: *The special function of the limb should be considered, and as far as possible preserved in selecting the point and method of operation.* Unfortunately, however, if a score of limbs are examined, few, if any, will show that the surgeon was governed in the point of election of his amputation by the special functions of the limb, and the facility of adapting to it artificial appliances. It is most important to the patient that this be well considered, as it may determine whether he is to be a pauper for the rest of his days, or a self-supporting citizen. And this may best be arranged by a consultation of the operating and mechanical surgeons.

There has been much difference of opinion in regard to the relative advantages of amputation of the leg below the knee, and at the lower third, in regard to its usefulness to

the patient for the adaptation of an artificial limb. When patients were only able to obtain the wooden "pin and bucket," it was an advantage to have a short stump; but with the improvement in artificial appliances, it was found that a leg which had been amputated at its lower third could have applied to it an apparatus which would enable the patient to walk with great facility.

In our own day the principles which should govern surgeons in the election of the site and method of amputation of the leg are vague and not defined; and the results by no means sustain Pare's proposition in regard to the special function of the limb. One of the chief reasons for the diversity of surgical opinion in regard to amputations is, that not enough attention is given to the consideration of the mechanical aids which can be adapted to substitute the natural extremity; whereas, at the present time, artificial limbs have reached to such a point of perfection, that in the lower extremities they may be said to completely restore function and symmetry when the stumps admit of their proper application; and, moreover, they are sufficiently cheap to be within the unaided or aided means of all. As regards amputation of the leg, the two governing rules are: 1. Safety to the life of the patient; 2. Serviceableness of the stump. As regards the first, the chances for the life of the patient are doubled by the low operation; and, as regards the second, it depends on the point and method of the amputation.

To render a stump useful, it is necessary that it be absolutely free from tenderness, and the principal cause of tenderness is a thin, imperfect cicatrix attached to the bone. It is usually the result of sloughing, imperfect, or retracted flaps, which in themselves are produced by an operation yielding too thin coverings to the bone.

Tenderness may best be avoided by having the cicatrix situated anteriorly or posteriorly to the end of the stump, and the bone covered by a thick, fleshy mass, as practiced by Teale, of Leeds, or Lee, of London.

An important question arises here as to whether it is necessary for patients to bear their weight on the end of the stump, and the expert mechanicians answer, "Yes." Dr. Hudson, of this city, one of the best students of the mechanism of artificial appliances in this country, gives it as his opinion that a stump that will take the weight of the body is useful, whatever the method of support may be. And, if this is so, an important question that arises is, what part the periosteum may perform in this respect, when it is employed in covering the end of the bone. Since 1814 periosteal flaps have at different times been suggested, and, during the winter of 1862–'63, Assistant Surgeon G. M. McGill, U. S. A., practiced the use of these flaps to nourish the bone. His method was, to raise a section of the periosteum from the anterior surface of the bone sufficient in area to cover the cut extremity of the bone. The stumps are described as being well rounded, and capable of bearing pressure. The advantages which have been attributed to this method are: 1. That the cicatrix does not become attached to the bone. 2. That osteo-myelitis is prevented. 3. That the stump presents a rounded form and is firm.

The disadvantages are: 1. That the periosteum being poorly nourished, is liable to slough. 2. If it does become attached, osteophytes may develop, which will destroy the stump.

PHAGEDENIC CHANCROID.—The patient came into hospital suffering from a sloughing chancroid. It began as a soft chancre on the prepuce. After taking on a phagedenic character it involved and destroyed the penis, and then extended down and spread over the thigh. All treatment proved useless to stop its progress, the actual cautery proving absolutely of no avail.

NYMPHOMANIA AND VAGINISMUS CAUSED BY ANAL FISSURE.

From the Detroit Review.

IN a recent paper "On some Forms of Rectal Diseases of Women," Dr. Edward W. Jenks, of Detroit, writes as follows:

Many of the disorders to which the rectum is subject are, without doubt, of much more frequent occurrence among women than men. The association of uterine and rectal diseases is quite common, as may also be said of uterine and vesical disorders. The truth is, that the continuity of tissues, the distribution of nerves and vessels, and the intimate relationship existing between the pelvic organs, render it obvious why disorder either of function, structure, or place of one may produce analogous condition in another. To treat symptoms alone in diseases of the pelvic region, as in any other part of the body where viscera can be subjected to physical exploration, is most thoroughly unscientific. There are certain symptoms common to all pelvic diseases of women; others are peculiar to certain individual diseases. I am prompted to mention this as prefatory to a short paper upon certain forms of rectal diseases, for the reason that I have known many cases of disorders of the rectum where the patient had been treated alone for uterine disease, and *vice versa*, and I design mentioning some cases in illustration of the assertion.

[From those reported, we extract the following interesting cases of Fissure of the Anus:]

Nymphomania.—M. R., aged 20, unmarried, was sent to me by one of my former pupils as a patient that was extremely unfortunate, on account of her insatiable venereal appetite, but that it had existed only a short time, and that as yet she had not been guilty of any offence in that direction beyond masturbation. She was put in a quiet boarding-house, and under the most careful surveillance. Every symptom indicated some pelvic disorder, rather than a mental disease. Examination of the generative organs revealed no indication of their disease beyond an undue congestion of the external organs, and especially in the neighborhood of the clitoris, where there was a slight abrasion. I learned that defecation was followed by excruciating pain, and upon examining the rectum I found a broad, irritable ulcer, just within the verge of the anus. Ether was administered by Dr. Walker, when I made forcible dilatation of the *sphincter ani externum*, after the manner first suggested by Recamier. It is needless for my present purpose to follow up the details of treatment in this and the other cases reported in this paper. I will only add that it was a matter of astonishment to the few medical gentlemen familiar with the history of this patient to observe that, with the cure of the anal fissure, the nymphomania disappeared. She has since married, and when I saw her last she informed me that she was in excellent health, and happy in her new relationship.

Vaginimus.— Mrs. S., aged 34, had considered herself for some years as a sufferer from uterine disease. When I first saw her she was confined to her bed, and had been most of the time for the preceding six months. She had been told by her medical attendant that in all probability there was some disorder of the womb that was producing all her physical ailments. The local treatment advised consisted of emollient and astringent vaginal washes. Every symptom of which I could learn caused me to think there was some form of disease of the uterus or its annexes. Upon attempting to make a digital examination of generative organs, I was compelled to desist on account of the severe spasmodic pain my finger produced at the ostium vaginæ. My diagnosis of the case was vaginismus, which was further corroborated when

I learned that coitus had been for a long time impossible, and the few attempts at it had been followed by days of suffering. At this time my attention was not directed to the rectum for any symptom or complaint of the patient, but at a subsequent visit I found her exhibiting symptoms of the most intense agony, and upon inquiry as to its cause learned that her bowels had just moved, and that for more than two years, whenever she had had an evacuation of the bowels, her sufferings had been of a like character, while for the past few months they had been gradually increasing in severity.

I then attempted to make a digital examination of the rectum, but soon found that it caused such severe pain that I deferred it two days, when ether was administered. I then discovered the cause of the patient's intense suffering to be due to a broad and unusually deep fissure within the anus, together with one of those small and extremely sensitive excresences so frequently found cropping out from the mucous membranes of this locality, as associates of irritable ulcers of the rectum. I removed the small growth, and then forcibly dilated the sphincter after the usual method. The patient made a good recovery, and with the cure of the fissure there was an end to both the painful defecation and the vaginismus. The removal of the latter difficulty was apparently quite as satisfactory as the relief from physical suffering, for its existence had begun to be a cause of the most disagreeable sort of domestic unhappiness. The transition from a bed-ridden patient to a lady of active habits was quite rapid, nor did she require much further medical treatment.

THE PATHOLOGY OF THE BLOOD.—M. Laptschinsky, of St. Petersburg, contributes a paper to the *Centralblatt*, on the microscopic changes undergone by the blood in various diseases. He finds that in various diseases in which marked febrile symptoms are present, the microscopic aspect of the blood is essentially different from that of health. The changes consist in the blood-corpuscles not running into regularly formed rouleaux, but accumulating in heaps or clumps of various size and shape. The individual blood-corpuscles frequently appear swollen and cloudy, and their contours less distinct than natural. Small corpuscles, one-third of the normal size, are often met with, some of which exhibit a more intense color than natural, whilst others are completely pale. In the interspaces of the clumps of red corpuscles, great numbers of white corpuscles may be seen, often coalescing to form groups of from 3 to 8. In typhus he counted from 60 to 80, and more, in one field of vision; in cholera from 110 to 130. Careful enumeration of the relative numbers of white and red corpuscles four days after death in the above cases showed that there was 1 white to 60 red corpuscles in the case of typhus, and 1 white to 23 colored in the case of cholera. In a very anæmic woman, suffering from suppuration in the knee-joint, the proportion of the white rose to 1 to 13 red. The white corpuscles in these cases presented unusually active and extensive amœboid movements. The nuclei of the colorless corpuscles took a part in the amœboid movements, and could be seen altering their position and form in the interior of the white corpuscles. The thorn-apple or horse-chestnut-like form of the red corpuscles he did not find to be unusually frequent. He found, however, large quantities of granular or detritus-like material in the blood of febrile, but not much in the blood of cachectic and anæmic patients. From his enumerations he feels satisfied that in febrile diseases, and in Bright's disease, the conversion or development of white corpuscles into red is either materially retarded, or is entirely arrested.—*London Lancet*, Jan., 1875.

PHOSPHIDE OF ZINC.—At a recent meeting of the Obstetrical Society (*Lancet*, Feb. 27) Mr. J. Ashburton Thompson communicated a short paper exemplifying the advantage of employing phosphide of zinc in the treatment of chlorosis and anæmia. It succeeded in relieving the symptoms where iron had failed, and that rapidly. Phosphorus was of great value in the treatment of patients recovering from uterine hæmorrhage, and in all cases of anæmia, and seemed to exercise a specific influence upon the neuralgia so often met with in these cases, encouraging the general nutrition of the body. Free phosphorus is not the treacherous poison it has hitherto been considered to be. It is a fatal and potent poison, it is true, but its therapeutic effects may be obtained with precision and perfect safety. If proper formula be employed, no apprehension of unexpected or uncontrollable poisonous effects of a therapeutic dose need hinder its general employment.

Dr. Routh said it might be known to some members of the Society that he had made several inquiries on the employment of phosphorus. In some cases it produced marvels, especially in cases like those detailed by Mr. Thompson, due to deficiency of phosphorus in the system. But it occasionally acted injuriously, by producing headache and giddiness; and in a few cases (of idiosyncrasy perhaps) it acted as a deadly poison, even in the first dose, sometimes immediately producing vomiting and syncope. The safest preparation was the phosphide of zinc; but it was a medicine always to be closely watched when given.

Dr. Tilt inquired what preparation of phosphorus Mr. Thompson recommended.

Mr. Thompson, in reply, said Dr. Routh had revived the old objection, not because it was a poison, but because we cannot calculate the results. These arose from decomposed phosphorus.

Dr. Playfair inquired if the zinc phosphide was not insoluble in pill.

Mr. Thompson replied that some acid tonic given simultaneously would serve to assist in the decomposition. —*Phil. Med. Times.*

SALICYLIC ACID.—The *Boston Medical and Surgical Journal*, March 11, contains an abstract of a letter received by Prof. Horsford from Kolbe, of Leipsic, in which the latter gives various details of interest relative to the use of this product. In the lying-in hospital of Leipsic it seems to have superseded carbolic acid as a disinfectant for the hands, vaginal douching, application to ulcera puerperalia, etc. It is used in solution in water of one part in three hundred to one part in nine hundred, or as a powder mixed with starch in proportion of one part in five. Kolbe recommends the trial of this remedy internally in the various zymotic diseases, in pyæmia, bites of dogs, etc. In order to prove its innocuousness, he administered to himself and a number of students various doses of the acid, up to twenty-three grains a day. The following is recommended by Wunderlich as a convenient formula for its administration:

℞	Acidi salicylici,	gr. xvi;
	Ol. amygdalæ dulc,	f ʒ vi;
	Acaciæ gummi,	ʒ iii;
	Syrupi amygdalæ,	f ʒ viiss;
	Aq. aurantii flor., ad	f ʒ iv.—M.

Salicylic acid is very little, if at all, absorbed through the skin.— *Phil. Med. Times.*

IODINE AS A SUBSTITUTE FOR IODIDE OF POTASSIUM.—It is found that in some cases, where iodide of potassium is not tolerated by the stomach, iodine itself can be administered in the form of pills.

The iodine is first suspended in albumen, and afterward the combination is dried and powdered. In this way one-quarter grain of iodine can be made into a pill, and two and a half grains can be given daily, without disordering the stomach. This method was obtained from Paris, and proves of much service in relieving tertiary symptoms.—*N. Y. Medical Journal.*

ON THE EFFECT OF VENOUS OBSTRUCTION OF THE SKIN.—Dr. Auspitz has lately brought before the k. k. Gesellschaft der Aerzte in Vienna, some observations upon the effect of venous obstruction of the skin, which are reported in the *Allgemeine Wiener Medizin. Zeitung* for November 3.

1. A ligature was tied round the arm of a healthy person, as if for bleeding. First the superficial veins swelled, then a livid color spread over the arm, beginning on the flexor surface (where the skin is thinnest), and at last affecting all but the volar eminence (the thickest part of the skin). At the same time the temperature sank. The next effect was œdema of the skin, followed in from five to ten minutes by the appearance of numerous patches of red or brownish-red color, accompanied by minute spots, which were either bright scarlet or purple in tint. On removing the bandage, the cyanosis first disappeared, then the œdematous swelling; next the red patches gave place to a diffused blush of the whole arm; and lastly this disappeared, leaving only the minute red spots, which remained for several hours or even days. Comparing these appearances with those observed by Cohnheim in a rabbit's ear as the result of mechanical venous obstruction, there can be no doubt that the minute red spots above mentioned are extravasations, either of red blood-corpuscles or of their hæmoglobin in solution.

2. Similar experiments were next tried by Dr. Auspitz on the arms of persons suffering from measles, variola, and other cutaneous diseases.

a. In the cases of measles, it was observed that the large red patches above mentioned coincided with those of the eruption; and that beside the minute ecchymoses, larger spots of cutaneous hæmorrhage sometimes appeared.

b. The effect in cases of urticaria was less marked. The wheals were more prominent, and minute ecchymoses were not more frequent (perhaps less so) than in the normal skin.

c. In ordinary small-pox, there was intense congestion of the bases of the pustules, and the points of cutaneous hæmorrhage were both more numerous and larger than in a normal arm; but there was never any extravasation of blood in the pustules themselves.

d. In cases of hæmorrhagic variola the whole of the arm below the ligature became rapidly covered by a dark-blue lividity, which concealed all minor shades of color. This was the case even when there were few or no pustules; and when these were present, they were not themselves the seat of extravasation of blood.

e. The ligature applied to the arm of patients suffering from scarlatina had little or no effect beyond that observed in the experiments above noted on the normal skin.

f. In "scorbutic affections—*erythema nodosum*, *morbus maculosus Werlhoffii*, *purpura rheumatica*, and scurvy proper"—Dr. Auspitz was surprised to find the effect of the ligature trifling. There was no scarlet injection of the skin and no ecchymosis. This seems to confirm the old belief (recently called in question by Cohnheim) that purpura depends on a change in the blood itself, and not on any difference of pressure in the circulation, or on anatomical lesions of the blood-vessels.—*London Medical Record*, December 30, 1874.

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Original Communications.

PERINEAL SECTION.

BY E. R. WILLARD, M.D., WILMINGTON, ILL.

Extract from an article read before the Will County Medical Society, April 6th, 1875.

THERE has been so much written the past ten years upon external perineal section, or urethrotomy, that it would seem a correct appreciation of the value of the operation had already become fully established by the profession.

Although such may seem to be the fact from the published accounts of cases, still, when we come to look for these cases, we find them confined to a small, select number of surgeons, and those mostly of a number who make a specialty of that department of surgery.

So far back as the seventeenth century, such men as Desault and Chopart condemned the operation on account of the great mortality attending it, and thus brought it into disrepute. In 1817 Dr. A. H. Stephens performed the operation with entire success, followed soon after by Jameson, Rodgers, and Warren, all of this country, and with the same uniform good result.

Although this was the case fifty years ago, and all well-informed surgeons of a later date must have been fully conversant with these facts, still the operation has seldom been performed since that time unless by specialists.

Prof. Van Buren says it is "one of the most difficult and uncertain proceedings of surgery."

Prof. Markae says "the dangers of the operation itself can hardly be separated from those of the disease for which it is performed," while Prof. Gross observes that "the operation is by no means free from danger, and requires the most consummate skill for its successful execution."

In looking over some notes taken in 1851, from clinical lectures of

Prof. Brainard, I find that he regarded the operation as more hazardous to the patient than that of puncturing the bladder above the pubis, or through the rectum, as instanced more particularly by a case operated upon by the former method (puncture above the pubis) by Prof. Brainard at that time. The case, a man over sixty years of age, had retention of urine thirty-six to forty-eight hours. A trocar was thrust in above the pubis, and the water drawn off. Result: the man died in a few days.

Prof. Hamilton states in his late work that "the operation will require more skill and patience than almost any other in surgery." With such authority it is no wonder the operation is confined mostly to specialists, and that most of the well-informed physicians and surgeons throughout the country are more inclined to puncture above the pubis, or through the rectum, than perform urethrotomy.

The main consideration in the performance of this operation is the danger attending it; and, so far as we are able to judge from the writings of such men as Syme, Miller, Thompson, Smith, and Gouley, the operation is not any more dangerous than that for inguinal hernia; that is, the mortality attending the operation proper only being about six to seven per cent.

Taking into consideration the above statement, together with the fact that the operation will afford permanent relief, with the certainty of ultimate cure, provided a sound is used occasionally for some time thereafter, in almost all cases treated by this plan it would seem that any other operation would not be thought of for a moment, unless the prospects for success were the same.

Before giving the following case, I would state that Prof. Gouley is entirely opposed to tying in a catheter after the operation, on account of, first, its uselessness, and second, its occasional danger. First, because the urine does not pass out through the catheter, but dribbles down by its side. Second, the irritation caused by the catheter is ten-fold more than that caused by the urine, provided the retention of the catheter would prevent the flow through the wounds.

Case ——. July 21st, 1874, I was sent for by Dr. Watson to see Mr. William Gardner, a coal miner at the B. shaft, some five miles distant. He was suffering from retention of urine, caused by stricture of the urethra, consequent upon gonorrhœa, for which he had been treated by a number of physicians at different times the past three years, none of whom succeeded in passing a catheter.

As the retention was only partial, and the bladder never distended but slightly above its natural capacity, after which a capillary stream could be voided sufficient to relieve the urgent symptoms. He had continued in this uncomfortable condition for the past three years, up to a week previous to my seeing him, at which time he became very much worse, in so much that no urine had passed the urethra for seventy-two hours. The bladder was distended to its utmost capacity, reaching above the level of the umbilicus, giving the appearance of a woman between the sixth and seventh months of pregnancy, the distention having continued so long and to such an extent that the nervous sensibility had become partially destroyed, in so much that he expressed himself as quite comfort-

able as compared with the two or three days' previous suffering. I tried to introduce catheters and sounds of various sizes, all to no purpose. I then called in Drs. Merriman, Le Caron, and Willard to assist in the operation of perineal section.

Dr. Merriman having had considerable experience in passing the capillary probe-pointed whalebone bougies, as recommended by Prof. Gouley, thought he could enter the bladder without difficulty with one of these guides. After some two hours' unsuccessful attempts by Drs. Merriman, Le Caron, and myself, to make one of these guides pass the obstruction and enter the bladder, by introducing one after another, having as many as six and seven caught in the same place at one time, we were about giving up, when I succeeded in slipping one of these guides into the bladder.

We then withdrew the other guides, and took a small-sized catheter, perforated the end, and slipped it over the remaining guide down to the stricture, with the intention of forcing it through into the bladder; but this we found to be impossible, as all the pressure the catheter was able to sustain was not sufficient to overcome the obstruction. Finding further efforts in that direction of no avail, we removed the perforated catheter from off the guide and passed a silver catheter down to the point of stricture, put the patient in the position for lithotomy, with Dr. G. E. Willard in charge of the ether, Dr. Merriman the catheter, and Drs. Le Caron and Watson to assist as occasion might require.

I made an incision one inch and a half in length in the median line of the perineum, dividing all the tissues down to the catheter, opening the urethra a little anterior to its distal end. I then introduced a small grooved directory through the perineal wound into the urethra, pressed it firmly against the stricture, placed the point of the knife in the groove, and divided the stricture freely, so that Dr. Merriman was enabled to pass the full-sized catheter into the bladder readily. The bleeding was very light, and entirely checked by sponging with cold water. The catheter was tied in and left *in situ* for forty-eight hours. Although the catheter was retained in the bladder the first two days after the operation, still the urine passed entirely by the perineal wound at its side, thus showing that the retention of the catheter was of no use. The only reasons ever alleged for retaining a catheter *in situ* for any length of time after the operation, is to prevent the urine from coming in contact with the recently cut surfaces, thereby preventing the rapid granulation and union of the wounded tissues.

In two or three days after withdrawing the catheter the urine began to pass the urethra, and in a week none came through the perineal wound, granulation being so rapid that in four weeks the wound was entirely healed. In short, the patient made an excellent and rapid recovery.

Translations.

CLINICAL THERMOMETRY.

FROM THE "COMPENDIUM DER NEUEREN MEDICINISCHEN WISSENSCHAFTEN," BY DR. B. KRAUS.

Condensed and translated by Dr. H. Gradle.

HISTORY AND SCOPE OF CLINICAL THERMOMETRY.

PROMINENT amongst the physical signs of disease, we find *animal heat*, the exact determination of which is of the greatest value in the diagnosis, the course, the prognosis, the therapeutic indications—in short, the rational treatment of disease. The importance of animal heat was known to the physicians of antiquity, and ever since their time has it been more or less appreciated. The first thermometric instrument was invented and constructed by Sanctorious, professor of medicine at Padua († 1638). After the lapse of more than a century, Boerhave made use again of the thermometer, after it had been neglected for clinical purposes for this period of time. In the year 1797 there appeared a work by James Currie, who based his therapeutic indications and success on thermometric observations. But to De Haen, the renowned professor of the clinic at Vienna, belongs the honor of being the founder of clinical thermometry. It was he who introduced the study of thermometry into pathology, who urged the employment of the thermometer at the bed-side, and adapted his treatment according to the state of the animal temperature. It was he who first considered the return of the animal warmth from the morbid to its normal standard as the true evidence of restored health. Andral has also recognized the importance of thermometry in pathology, and formulated in the year 1841 a series of definite laws on the temperature in disease.

Baerensprung, Traube, and especially Wunderlich, have within the last few years introduced thermometry into practical medicine, as they were the first who furnished careful, regular, and complete observations on the relation of temperature with diseases in their course, duration, and termination. Wunderlich especially deserves credit for his exact investigations, on the strength of which he has founded on clinical thermometry as reliable a method of diagnosis as on auscultation and percussion, and this method has attained such a reliability that, ahead of all others, it indicates the existence, degree, and importance of a disturbance of the system. By Henri Roger the thermometer has been employed in diseases of children, and a series of scientific observations on temperature in the different stages of childhood and its various diseases have been published (*Arch. Gen. de Med.*, 1844–5). Surgery, also, has resorted to the thermometer. Hunter first studied the temperature

in surgical diseases; his example was followed by Thomson, Breschet, Bequerel, and finally by Demarquay, who has made experiments on the state of the temperature during pain, hæmorrhage, the ligation of arteries, traumatic inflammations, poisoning, etc. The same surgeon, as well as Dumeril, Lacointe, and many others, has examined the influence of therapeutic agents on the animal heat.

Clinical thermometry, says Wunderlich, is an objective physical method of examination, furnishing numerical evidence of a sufficiently sensitive nature to indicate progressively the changes in the organism.

Many physicians have placed thermometry, as a means of diagnosis, above percussion and auscultation; though this is hardly applicable in all cases. That much is certain, that it yields a diagnostic basis, possessing physical exactness, and independent of the estimation or the practice and acuteness of the senses of the observer.

The determination of temperature is all the more important since, as Wunderlich correctly affirms, it is at present the only exact expression, readily observable and with sufficient minuteness, of the total alteration of the organism; hence, by following it through the course of numerous cases of the same disease, the questions can be solved whether there are pathological processes obeying definite laws in their course, what deviations from this regular course occur, and by what they are caused.

The normal temperature of the human body, almost independent of the medium in which it exists, is in itself no sign of health, though the maintenance at its normal point under different influences, as hunger, cold, bodily and mental labor, motion, etc., if they do not reach such a degree as to cause a disturbance inevitably, can be considered as evidence of a sound constitution. It is true there are pathological conditions not resulting in a measurable alteration of the animal heat—apyretic diseases—but disease exists whenever the temperature exceeds the physiological limits, and *cæteris paribus* proportionately to the extent of the deviation. By one single thermometric examination we can merely decide whether the affection is or is not febrile; occasionally a diagnosis of the morbid variety can be formed from the observation of the first few days. More frequently we exclude with absolute certainty, by means of the temperature, diseases simulated by the other symptoms. In other cases of a doubtful nature, voluntary simulation can be thus detected. But also the different individual modifications of the affection, the transition from one stage to another, the time of exacerbation or remission, the development of complications, the severity of the morbid process can be recognized earlier and more precisely by the thermometric method than by any other. As soon as a variation from the ordinary thermometric course of any disease is observed, we have received an important warning, and oftentimes the first, bidding us to search for the cause of this irregularity, thus leading not rarely to the discovery of unknown complications. At the time of convalescence, also, the temperature is the best index of recovery. Finally, the animal warmth affords us the best guide as to the efficacy or want of effect of our therapeutic procedures.

In concluding this chapter, there is yet to mention that the fear that thermometric observations could not be resorted to in private practice on account of the opposition of the patients, is not warranted after the experience in this direction with the greater part of the public. Similar apprehensions were entertained when auscultation and percussion came into use, but now every practitioner observes that patients are often not satisfied unless thoroughly examined, even more than is necessary, at each visit; and similarly thermometry, after the public has once understood its importance, will become to them a matter of course. No one can shun the slight expense of purchasing an instrument, and, as its application does not inconvenience the patient, opposition to its use can hardly be expected; even the remonstrances of children can easily be overcome with a little tact. At the same time the manner of application is so simple that any patient or nurse can manipulate it with ease, when it remains for the physician but to read off the number, which can certainly not consume much time even in large hospitals—the less as it enables the physician to dispense with other modes of examination and avoid unnecessary questioning.

PROPERTIES OF A THERMOMETER FOR MEDICAL PURPOSES.

The estimation of temperature by means of the hand is a very unreliable method, as the hand, on account of its shape, cannot adapt itself to all parts, besides it adds or abstracts warmth from the place of contact. The hand appreciates only the amount of heat it receives or loses in a given time; in other words, the difference between its temperature and that of the object examined. Thus cold can be received if the body is cooler than the hand, even though it be of a temperature above the normal point. The use of the hand gives us, therefore, but an imperfect idea of the warmth of a body, and a hint whether a more accurate determination is indicated.

For the latter purpose we require a reliable, sensitive, easily transportable and solid instrument, properties mostly possessed by the mercury thermometer. Such a thermometer, according to Wunderlich, is to be of the following description: The mercury reservoir is to have a diameter of one-third to three-fourths centimetre; if larger it loses its sensitiveness; if smaller it cannot adapt itself well to the surface of the parts. The spherical shape is preferable to the cylinder for use in the axilla; at least, the reservoir, if cylindrical, is not to possess too great a length. For the rectum and vagina a conical reservoir tapering downwards appears most suitable. A hemisphere with flat bottom has been recommended for observation of external surfaces, but gives poor results. The glass of the reservoir should neither be too thin, on account of its fragility, nor too thick, as this would reduce the sensitiveness. The tube of the instrument is to possess a uniform calibre, so small as to enable the unaided eye to divide the space between two-tenth degrees into halves and quarters. The tube is to be of such a length that the degrees ordinarily observed are at a distance of at least twelve centimetres from the bulb to permit an easy observation of the instrument while in place.* For facil-

* This description does not refer to self-registering instruments.

ity of handling, however, the entire length ought to be limited, not exceeding much the expansion of the mercury corresponding to the degrees usually attained on man. It suffices, if the scale covers but the degrees between 32.5–45° C. (90–113° F.), perhaps including also those down to 75° F. for bathing purposes, the highest being at a distance of about twelve centimetres from the bulb. A division into one-fifth degrees is sufficient for ordinary purposes.

The accuracy of the thermometer depends more on the uniform construction of the scale than on the correctness of its numbers, which latter can be regulated by comparison with a standard. If the difference between it and the standard is the same at all heights, the mere addition or subtraction of the same corrects the result perfectly. Occasional testing is to be recommended for the best thermometers for medical purposes, for the glass suffers light changes of its molecular architecture, which can affect the calibre, especially of the bulb, so that after a time the difference may amount to several tenths degrees; perhaps, also, the compression in handling the bulb, etc., may be a factor of the result. Whenever the temperature observed seems unaccounted for, a speedy testing of the thermometer is advisable.

An exceptional accuracy is attained by the use of the so-called *metastatic thermometers of Walferdin*, while for some investigations the thermo-electric apparatus appears most serviceable. The latter is constructed on the principle that an electric current is induced in a metal ring consisting of two different metals, whenever the joints are subjected to different temperatures, even though this difference be very considerable, and that this current can be indicated by the magnetic needle. Bequerel has used such an apparatus for physiological purposes. Wunderlich considers it superfluous for clinical observations. The thermograph of Marey has not yet been tested at the bedside, and will hardly ever be; it is intended to give a graphic trace of the thermometric course.

PLACE OF APPLICATION OF THE THERMOMETER.

While the thermometer can be applied to any part of the body, the most suitable place varies with the purpose of the investigation. If it be the intention to measure the temperature of a limited part, the instrument is of course to be applied at that place. If this is superficial, a thermo-electric apparatus is preferable, as the mercury thermometer is cooled off by the surrounding air unless protected. The instrument must be so applied as to be surrounded by the parts. In most cases the closed axilla appears the most suitable, as its examination does not prove inconvenient to the patient. But in emaciated or restless patients the result is not accurate; besides the temperature is always lower, and slight oscillations are not as easily observed in the axilla as in the mucous cavities, mouth, rectum, vagina, or uterus. Holding the thermometer in the closed hand is a method of no value in the determination of the bodily temperature, unless we wish to compare the extremities with each other or with the trunk.

Insertion into the buccal cavity is not a very accurate method, as the instrument is somewhat cooled off by

the inspired air; besides it interferes with the respiration of some patients, while in others it produces a tendency to vomiting. Other places of application are therefore preferable.

A more accurate plan than either of the preceding is to introduce the thermometer into the rectum, against which, however, patients frequently protest. The method is objectionable on æsthetic grounds. By the irritation defecation is occasionally induced, and an erroneous result is also obtained if the instrument enters fæcal masses. It is said, besides, that the temperature varies according to the depth, a correct result being obtained only if the bulb passes in as far as the prostate (Hunter).

Contractions of the rectum are sometimes observed altering the temperature (Billroth). It is, however, advisable to resort to the rectum as a place of application in diseases and stages in which great accuracy is necessary, and to return to the axilla when such precision becomes less important, of course noting the place of application in the tables.

The insertion into the vagina is a more accurate method than the previous, but not often applicable. It is, of course, requisite whenever the temperature of the internal genital organs is to be determined.

Winkl, Schroeder, Traube, and W. Schlesinger, of Vienna, have also made thermometric observations in the cavity of the uterus, partly to study the temperature of the female system during menstruation, pregnancy, parturition, etc., partly to determine the influence of pathological calorification on febrile temperature, and finally to diagnosticate pregnancy in the earlier months before other symptoms are developed. The possibility of such a diagnosis is warranted by the fact that the child has a temperature of its own slightly higher than that of the mother, and that the uterus is found warmer than the vagina in pregnancy, probably from the higher temperature of the fœtus. The main difficulty in these investigations is the construction of a suitable instrument, as the ordinary thermometers cannot be introduced into the womb.* Schlesinger demonstrated in the "Gesellschaft der Aertze in Wien" (session of March 6th, 1874), a thermometer for this purpose, curved at one end, the other having attached to it a scale divided into tenths of degrees. On account of its fragility, the mercury reservoir is surrounded by a metal covering, permitting its introduction into the uterus without danger. In order to avoid average temperatures, the bulb was reduced in length from three and one-half to about two centimetres, so that the cervical and corporeal cavities can be measured separately.

By means of this instrument, Schlesinger has found the difference between axilla and vagina to amount to 0.21° C. (0.38° F.), between vagina and uterus to 0.16° C. (0.29° F.), in the non-pregnant state. These results agree with those of Schroeder and Winkl, who also observed a higher temperature in the uterus than in the vagina, both in the pregnant and non-pregnant state. Further on, he found both uterus and vagina warmer than the rectum, the latter by about 0.05° C. (0.09° F.). Between the cavity of the uterus and the cervix there is also a slight difference in favor of the former.

* Not so with self-registering instruments.

Editorial Department.

ILLINOIS STATE MEDICAL SOCIETY.

THE next annual meeting of this Society, is to be held in Jacksonville, commencing on the morning of the third Tuesday in May (the 18th inst.). The place of meeting is one of the most attractive in the state, and the committee of arrangements, with their professional brethren in that city, will spare no pains to make the reception and stay of delegates and members, as pleasant and profitable as possible.

The chairmen of the several standing and special committees, from whom reports are expected, are as follows: On Practical Medicine, E. P. Cook, M.D., of Mendota; on Surgery, Edwin Powell, M.D., of Chicago; on Obstetrics, Hiram Nance, M.D., of Kewanee; on Drugs and Medicines, Wm. E. Quine, M.D., of Chicago; on Necrology, E. Ingalls, M.D., of Chicago; on Ophthalmology, E. L. Holmes, M.D., of Chicago; on Otology, S. J. Jones, M.D., of Chicago; on Diseases of Children, J. O. Hamilton, M.D., of Jerseyville; on Diseases of the Respiratory Organs, H. A. Johnson, M.D., of Chicago; on Galvano-Therapeutics, D. Prince, M.D., of Jacksonville; on Diseases of Women, J. T. Pearman, M.D., of Champaign; on Diseases of the Nervous System, J. S. Whitmire, M.D., of Metamora; on Medical Jurisprudence, R. J. Patterson, M.D., of Batavia; on Dermatology, Chas. G. Smith, M.D., of Chicago; and the Annual Address by the President, J. H. Hollister, M.D., of Chicago. This list of names is a sufficient guarantee that there will be an abundance of reports and papers to occupy the attention of the Society for three days at least. We wish the profession in every part of the state could be induced to organize societies and send delegates to the state and national organizations. It would aid much, both in elevating the character, and extending the usefulness of the whole profession.

"Each local Society shall have the privilege of sending to the Society one delegate for every five of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital, and every other permanently organized medical institution of good standing, shall have the privilege of sending one delegate.

"*The Members by Invitation* shall consist of practitioners of reputable standing from any part of the United States. They shall receive their appointment by invitation of the meeting, after an introduction from any of the members present, or from any of

the absent permanent members. They shall hold their connection with the Society until the close of the session at which they were received, and may participate in the discussions without the right of voting.

"*The Permanent Members* shall consist of regular graduates from reputable schools of medicine, who have served in the capacity of delegates, or such other physicians as may be proposed by two members of this Society, reported on favorably by the committee of investigation, and receiving a two-third vote of all the members present."

A circular will be sent to each member from the committee of arrangements, giving all necessary information relative to the programme, and the arrangements made with the different railroads in regard to reduction of fare, etc.

Correspondence.

A LETTER FROM PARIS.

EDITORS MEDICAL EXAMINER: Since my last letter the number of Parisian medical journals, already great, has been increased by the appearance of the *Annales des Maladies de l' Orielle et du Larynx*. This journal is to appear every two months, and is published by MM. Ladreit de Lacharriere, physician in chief at the National Institution for the Deaf and Dumb, Isambert, physician to the hospital Lariboisiere, and Krishaber, free professor of laryngeal pathology. It will be unique in its field of investigation in France, and the editors state in their opening article that their intention is to unite in the same publication the diseases that Otoscopy, Laryngoscopy, and Rhinoscopy permit to study, inasmuch as these diseases are united by continuity of tissue. The first number contains, among other articles, an essay on the classification of the diseases of the larynx and pharynx, by Dr. Isambert; an account of the disease of Meniere and vertigo in diseases of the ear, by Dr. Ladreit de Lacharriere, and an article on rhinoscopy by Dr. Krishaber. Altogether, the journal starts under very favorable auspices and will be welcomed by the profession at large, though more particularly by the specialists.

Dr. Vibert (of Puy) has commenced a series of articles in the *Journal de Therapeutique*, on hypodermic injections of morphia, that promises to be long continued, as during a dozen years, from his own account, his therapeutics seem to have been somewhat largely confined to the use of a hypodermic syringe with a solution of morphia. From the child of seven years to the patriarch of seventy, this mode of treatment was followed, and though

space forbids his mentioning many of his cases, we find recorded a great variety of the ills that man is subject to, from erysipelas to aortic insufficiency, from metrorrhagia to asthma, all yielding under the benign influence of opium given in this manner. Yet amid all these records, that but repeat experience almost classic, we find one fact that promises to be of service in measuring the effect of morphia upon the system. This is found in his first article in the *Journal* for February 25th. From his long experience Dr. Vibert has found that unless the pupil is immobile, unchanging with the presence of a light, the patient is not fully under the influence of the drug. From the lessening mobility of the pupil the effects of the morphia can be studied with certainty, and from this action the writer states that the pupil has become for him "a veritable manometer of the action of the morphia," which indicates just when to stop the exhibition of the medicament. To illustrate, he gave a woman 8 milligrammes of morphia in order to quiet her during a violent attack of hepatic colic. Half an hour afterward the patient, who had not vomited up to that time, commenced to vomit violently, and had no diminution of her sufferings. The question was whether the susceptibility of the patient to morphia had caused this, or whether it was due to the hepatic colic. Finding the pupils still dilated, he gave another injection of 12 milligrammes. Twenty minutes afterward the pupil was two-thirds contracted, and remained so in the dark, but would still contract under the influence of a light. There was some relief, but it was only relative. Finally, the pupil still preserving about one-third of its contractility, half an hour after the second injection he gave another centigramme, which caused a permanent closure, nearly complete, of the pupil, and at the same time enough relief to permit the patient to sleep. "The modifications of the pupil had thus furnished me with precise indications for the progressive dose of the medicine, and by that had permitted me to determine it with an exactitude nearly mathematical."

It seems that the profession in France is to lend its voice against the Morse system of telegraphing, if we can judge from a report made by M. Onimus before the Societe de Biologie on March 20th. He had had occasion to observe in telegraph operators phenomena analogous to those found in Scrivener's Palsy. In one case the person had been employed as a telegraph operator for nineteen years, and ten years ago had commenced to have difficulty in manipulating his instrument. At first he found that the letters *s*, represented by three dots, *i*, represented by two dots, and *u*, represented by two dots and a dash, were no longer neatly made. At the same time he felt a sort of cramp in the hand while tracing these letters. The letter *d*, made by a dash followed by two dots, he could trace more easily than the letter *u*, which is represented by the reverse—two dots followed by a dash. The man accustomed himself to sending his dispatches by using his thumb alone. For two years he had no difficulty, but at the end of that time his thumb was affected in turn. For two months he was able to continue his work with the index and middle fingers. Finally he could only use his fist to operate with, and, the cramps returning even when he

performed his work in this way, he was forced to stop. In addition to the cramps there was a trembling of the hand and forearm when attempting to operate. Frequently he was troubled with sleeplessness and occasional signs of cerebral excitement.

Inasmuch as these accidents only arise from the use of the telegraphic signs of Morse, M. Onimus concludes that it may be necessary to abandon that system.

The indefatigable Dr. Bouchut gave a public demonstration of his cerebroscopic facts on March 16th. The little amphitheatre of the Hopital des Enfants being properly darkened for the occasion, for an hour and a half he illustrated, by means of a reflecting lamp, the appearance of the retina and blood-vessels of the eye as seen in different diseases of the brain and spinal cord. Many of the lesions had been verified by post-mortem examination, and the majority of his illustrations were taken from cases that he had had in his service since 1862, when he commenced his investigations on this subject.

The conclusions that he has arrived at as to the actual value of this means of diagnosis are published in the *Gazette des Hopitaux*, under the title of "Cerebroscopic Review for 1874." After giving in detail the history of observations made upon more than thirty cases, he concludes that the utility of the ophthalmoscope for medical diagnosis is demonstrated as follows:

When there is hyperæmia or hyperæmic swelling of the optic nerve, we can diagnose the mechanical or inflammatory hyperæmia of the brain found in meningitis, cerebral hæmorrhage, effusions in the brain, and sometimes the diagnosis can be made of spinal diseases, ataxic or other.

When he finds œdema of the papilla added to the hyperæmia, Dr. Bouchut diagnoses an œdema of the meninges or an embarrassment of the cerebral circulation that may be determined by meningitis, by certain cerebral tumors, by cerebral hæmorrhage, etc.

When there is an anæmia of the nerve in the retina and in the choroid (nervo-retinienne et choroidienne), we can diagnose the cerebral hæmorrhage of softening, and if the anæmia is complete, it is a certain sign of death. The arrest of the cerebral and cardiac circulation is shown by the emptyness of the vessels of the eye, and by the bloodless network of the choroid.

When there is an inflammation of the retina and the nerve (nervo-retinite optique), with a fatty exudation, we can diagnose a chronic meningo-encephalitis, an encephalitis that depends on cerebral tumors and the change in brain substance that accompanies these tumors.

When there are varicose veins and thrombi in the retina, there are thrombi in the meninges or in the sinuses.

Aneurisms seen in the arteries of the retina show that there are miliary aneurisms in the brain.

When there is simply an hæmorrhage in the retina, we can assert that there exists a compression of the brain from hæmorrhagic or other effusion, but if this hæmorrhage is accompanied by a fatty degeneration of the retina, it is because there is cerebral steatosis, which is the case in chronic albuminuria, leucocythemia, and diabetes mellitus.

When there is atrophy of the optic nerve, we can diagnose the presence

of tumors of the brain and of cerebral or spinal sclerosis.

Finally, tuberculous granulations are never seen in the choroid without the existence of similar changes in the lungs and other organs. In regard to the white spots that he names tuberculous granulations, it has been advanced that they are not really that in structure. Referring to this point, he argues that be their structure what it may, their presence demonstrates clinically that which he states.

An incident has occurred that does not reflect very favorably upon the Parisian priesthood. The *Journal Official* had commenced to publish a series of articles by Dr. Bouchut, in which hypnotism was discussed. While mentioning the effect of long-continued fixation of the sight upon an object near at hand, the Doctor showed that many of the remarkable experiences of olden times could be thus explained. The wondrous exhibitions that were sometimes given of fowls thrown into a state of insensibility from being forced to gaze at a chalk-mark, could easily be accounted for from fatigue of the nerves, and in the same manner other manifestations of this nature could be brought from the domain of the supernatural to that of natural phenomena. These practical views brought upon the editor of the *Journal* a host of opposition from the clergy, who denounced the publication of such heretic views. Not being able to stand against the pressure brought to bear upon him, the editor referred the matter to Dr. Bouchut. The latter finally published a letter in the *Journal*, stating that though he intended no disrespect to the traditions of the church, inasmuch as the articles seemed to create a difficulty he would discontinue them in the *Journal Official*, mentioning, however, that they would be published elsewhere; that is, in the medical journals.

Last year Pajot, professor of obstetrics and diseases of women and children, did not give his regular course of lectures, his place being supplied by a professor agrege. However, his retirement from the lecture-room being universally regretted, in response to a petition signed by all the Internes in the hospitals, and other students to the number of several hundreds, he has again commenced a course of lectures in the summer session of the school, which began on the 15th of March. The enthusiasm with which he was greeted was something immense. The grand amphitheatre of the school was crowded to suffocation. Probably there were a thousand persons inside that could hear the lecture or at least see the lecturer, while the passage ways were crowded with those that could neither see nor hear, but who testified to their feelings by following up the applause from within by hearty, if erratic, demonstrations.

The attendance does not seem to diminish with succeeding lectures, and it was only the third day that I was able to get a seat where I could hear the lecturer. The professor demonstrated the diameters and axis of the pelvis, a subject not intrinsically funny, and yet, with his curious manners and unexpected illustrations, he kept his large audience amused and attentive, not permitting the interest to flag during the hour.

Dr. Pajot is pre-eminently a teacher, and has devoted the greater part of his life to teaching rather than to the real practical life of the profession.

In fact, it is narrated of him that when a lady would ask him to attend her during an approaching confinement, he would invariably reply, "With the greatest pleasure, madame, if I do not happen to be lecturing at that time!" It is not difficult to believe that under such circumstances his private practice remained very limited.

The question of the use of chloroform in natural labor has been very hardly contested in France, and, in consequence of a paper published last year by Dr. Campbell upon the benefit of the use of chloroform under these circumstances, as illustrated by a large number of cases in his own practice, Prof. Pajot has written an article which is very severe in its opposition to such a course. It first appeared in the *Annales de Gynecologie* for January, and has since been reprinted in pamphlet form. The writer examines the question under three propositions: How do they give chloroform in natural labor? When do they give it? What are the results that they obtain?

The first question he discusses by quoting passages from the work of Dr. Campbell, to show that either they do not give enough of the chloroform to produce an anæsthesia, or that, producing the full effect, they do it at the risk of the life of the patient, as the accoucheur cannot watch the face of the mother and the descent of the child at the same time. In the latter case he accuses the supporters of this procedure of negligence. In the former case, he says they "are not serious." "It is homœopathic."

In regard to the second question, of when they give the chloroform, he states that it is only at the third period of expulsion, that being very painful, the *true* anæsthesia can be given with benefit, and then they are deprived of the possibility of directing the efforts of the mother. The advocates of this procedure do not give chloroform during the last hours of dilatation, the part of labor worst borne, but when, outside of the dangers, the indication for true anæsthesia is found.

The third question concerning the results of the anæsthesia of the advocates of chloroform in natural labor gives Professor Pajot an opportunity to show his talent for sarcasm that he does not fail to improve. He attacks them upon the ground that the pretended semi-anæsthesia is only a delusion. The indications that give warning of the approach of a period of insensibility are mentioned in this way by the advocates of this procedure: "There is a roaring in the ears that exists in nearly all the cases, and which, when it exists, appears to us to indicate that they have reached a state of semi-insensibility." Here is an opportunity that the Professor seizes with avidity, and he writes of it: "So here is the indication, precise, scientific! They ask the woman, 'Have you a noise in the ears?' 'No, sir.' 'Then you are not semi-insensible.' 'And now?' 'Yes, sir.' 'Good, you are now semi-insensible.' This recalls involuntarily the famous dialogue: 'Are you deaf and dumb?' 'Yes, sir.' 'Very good.'"

The statement that no accidents have yet resulted from the use of chloroform in this semi-anæsthesia he says should occasion the same amount of astonishment as when we fail to see fatal accidents from the use of bread pills. He contends that this means is good as a temporizer, but has no

other usefulness. To illustrate this point, he narrates an experience of his own in temporizing, that I trust I shall be pardoned for translating, as it gives a good idea of the style of Prof. Pajot:

"I delivered some fifteen years ago a primipara, granddaughter of a dowager of seventy-five years. This aged dame, person of grand airs, as noble as dry, and as dry as impertinent—rare circumstance, for old families are generally of great politeness to us poor wretches, uncouth but useful — this respectable personage assisted at the labor. The expulsion advanced but slowly, the vagina being narrow and rigid, the perineum and the vulva resisting. The good but interrupted contractions discouraged the young woman. 'My dear,' said the dowager to me (it was the first time she had ever seen me), 'one of my friends has a medal that is good for delivering all women. Shall I go for it? 'Why not, madame,' said I, with deference, only too glad for this unexpected aid. The carriage departed, and half an hour afterward, when they announced the return of the noble grandmother, I gave the patient twenty-five centigrammes of ergot prepared in advance. The medal was placed on the breast of the girl, and twenty minutes afterward the labor was ended. During an hour the dowager deafened us concerning the suddenness of this miracle, and, head under the knife, she would have proclaimed the virtues of this talisman. It has served many times since; perhaps not always with such wonderful success."

Prof. Pajot concludes his article with several propositions on the use of chloroform in natural labor, as he judges it:

True anæsthesia applied to natural labor is a serious and scientific proceeding that can be discussed. Its dangers and disadvantages appear to us greater than its advantages.

The pretended *semi-anæsthesia* is as useless as inoffensive. It has nothing scientific or serious about it. It can be placed alongside those other dilatory means that act on the imagination of the woman, and that gain time, when in natural labor there is need of nothing else. They can make women think they would have suffered more had it not been for the semi-anæsthesia. Chloroform will be for the woman in child-bed like Providence, that it is always necessary to thank when one breaks one leg—both might have been broken.

The contrast between this article of Prof. Pajot's and the one which he criticizes is striking. One is scientific, the other practical. Dr. Campbell, by experience, arrived at a result that science had failed to reach. The immunity of a woman in labor from the dangers of chloroform Dr. Campbell's experience led him to ascribe to the violent contractions that forced the blood into the brain. This is a conclusion that is not easily attacked.

Prof. Pajot's writing is brilliant, scientific, and is taken as a defence of the position of the French school against the use of anæsthetics in labor. Not a defence, to quote his own words, "by the voice of the most obscure of its professors," but one which will probably have little tendency to interfere with the actual practice of using chloroform in natural labor.

C. C. MATTESON, M.D.

PARIS, April 5th, 1875.

Society Reports.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, APRIL 26TH, 1875.

Reported by Ralph E. Starkweather, M.D.

THE President, Dr. John Bartlett, in the chair.

Dr. Plym S. Hayes read a carefully prepared paper upon "Experimental Observations on Salicylic Acid," of which the following is a brief summary:

After stating and reviewing the opinions of Dr. Squibb concerning this acid, and quoting from Dr. Dalton in regard to the action of the digestive fluids, Dr. Hayes criticizes the expression catalysis, and states that in the old chemistries catalysis occupied a place of great importance, and was the pack-horse on whose back was strapped many of the inexplicable phenomena connected with chemistry. The new text-books generally ignore this expression. Fermentation, which has in a measure supplanted the term catalysis, refers, in its most restricted sense, only to that action, the cause of which is almost entirely due to living organisms. Dr. Squibb calls this class of ferments "*vital*," of which that produced by yeast, and many changes which occur in putrefaction, are examples. That chemical action in which living organisms have no influence, but the metamorphosis is caused by the action of some physical agent, or of some definite chemical compound elaborated by an organism—some organic substance—the same authority calls "*chemical*," being those which occur independent of vitality, as the production of volatile oil in mustard and bitter almonds, the effects of diastase, and similar changes. Dr. Hayes details two different series of experiments, in which he used some of Dr. Squibb's unbleached salicylic acid. The first series was instituted to determine whether the acid had the power of preventing the formation of glucose when saliva had been added to starch which contained a portion of acid. The object of the second series was to ascertain whether the acid arrested or retarded in any degree the action of the gastric juice, or its active principle, pepsin, on coagulated albumen.

Next follows the account of the individual experiments which had been conducted with scholarly and scientific precision; the results attained, and the chemical agents and tests employed, being in turn re-tested and verified by other methods and processes.

The following are the conclusions drawn by Dr. Hayes: First, that salicylic acid retards digestion in a marked degree, when performed artificially. Second, that it slowly coagulates albumen.

Dr. Hayes thought that we might look for different effects in the administering of the acid, according as it

may be exhibited by the mouth or by topical application to an abrasion, provided the statements of Prof. Kolbe and Dr. Squibb are each correct. Prof. Kolbe says that given internally, no trace of the acid is discoverable in the urine or fæces. Dr. Squibb states that when the acid is applied to wounds, it appears immediately in the urine (quoting from Thiersch, *Pharm. Centrahalle*).

The paper was discussed by Drs. Bartlett and Hyde.

CANCER OF THE STOMACH.

Dr. Etheridge gave the clinical history and treatment of this case, assisted by Dr. I. N. Danforth, who had made the post-mortem examination, and exhibited to the Society, by means of the microscope, numerous pathological specimens taken from this case. The paper is reserved for publication.

The discussion which followed called forth among other facts the noticeable one that the patient, with other members of her family, had thirty years previously partaken of a broiled chicken which had been kept in a new refrigerator. The day following the meal the entire family were prostrated by acute arsenical poisoning. From that time forward the patient had been subject in summer to bilious colic, and had been obliged to refrain from certain articles of food.

Dr. Danforth thought that there had at first been simple inflammation of the pyloric opening of the stomach, and that this tissue later in life became invaded by true cancer cells. Epithelial cells, provoked from their regular growth, may become atypical, and so, after years of constant irritation, become malignant—or epigrammatically, *The lawlessness of growth is the essence of malignancy*, speaking histologically.

QUINIA AND ITS ALKALOIDS.

Mr. Albert E. Ebert, late president of the American Pharmaceutical Association, addressed the Society briefly as follows:

There are a number of alkaloids in the Peruvian bark, quinia being the best known and most largely employed. There are besides (1) quinidia, (2) cinchonidia, and (3) cinchonia. The cinchonia in the red bark is nearly as abundant as quinia.

There has been an immense amount of these "cheaper" alkaloids made while manufacturing quinia, and there having been no demand for these other alkaloids, they have been stored away and their cost has been added to that of quinia.

The cheaper alkaloids are said by reputable members of the medical profession to have the same or nearly the same therapeutical effect as quinine. The manufacturers have made efforts to introduce these bi-products (the cheaper alkaloids) to the profession, and rid their stock of these alkaloids that have accumulated for years while making quinia.

Sweet quinine was then spoken of, and the history of the exposure of the fraud, and expulsion of certain parties from the American Pharmaceutical Association.

Cincho-quinine was next referred to. If the testimonials from physicians in regard to this nostrum are true, then cinchonia sulphate has a large medicinal virtue, for none can be attributed to the quinia it is said to contain.

Mr. Wentzel, of California, a competent and conscientious chemist, has

examined this nostrum, and found that it contained cinchonia only.

In 1873, Mr. Ebert had himself examined seven different original samples, microscopically and chemically, and did not find a trace of quinia in any of them.

In the wholesale market not one of the original packages made before 1874 can be had; they have either been used or bought up.

The samples now sold do not contain the alkaloid quinia but the sulphate salt of quinia, and this only in the *six-tenths of one per cent.* (6–10 of 1 per cent.)

The success of these alkaloids goes to show that in many respects they are as useful in therapeusis as quinia sulphate, and as they cost only twenty (20) cents per ounce, are much cheaper. If extensively used the price of quinine would be reduced, and the rapid destruction from the forests of these precious trees would be much lessened.

QUININE BRUTE.

In reply to a question, Mr. Ebert said that the article generally dispensed under the term quinine brute is chinodine, or the precipitated extract of cinchona bark, such as is found in the market under the name of "Wetherill's" or "Ellis'" extract of calisaya bark.

The process is published in Parrish's Practical Pharmacy, fourth edition, p. 665.

Trousseau, in his work on Therapeutics, says that quinine brute is a combination of all the cinchona alkaloids in the impure state.

Chinoidine is the residue after the crystallizable principles have been extracted from the mother liquid, evaporated down to a solid, extractive consistency. This preparation has the same relation to the crystallizable alkaloids that molasses has to sugar.

Dr. Etheridge had found that children and others could take quinine agreeably, if given in the syrp. glycyrrhiza. In one instance, a gentleman unable to take quinine was effectually relieved by twenty-grain doses of quinine brute.

Dr. Starkweather referred to an article on intermittent fever by Bouchut, which considered that quinine brute was the most useful remedy to prescribe for children. It is less soluble and less bitter, and more easily taken by children. It should be exhibited just after the fever, in the dose of three to six grains daily. This is nearly double the dose of quinine recommended to be given to children, and adds that it should be given by enema.

The Society, after transacting considerable routine business, adjourned.

OATMEAL, BONE AND MUSCLE.—Professor Forbes, of Edinburgh, during some twenty years, measured the breadth and height, and also tested the strength of the arms and loins of the students in the University—a very numerous class, and of various nationalities, drawn to Edinburgh by the fame of his teaching. He found that in height, breadth of chest and shoulders, and strength of arms and loins, the Belgians were at the bottom of the list; a little above them the French; very much higher the English; and highest of all, the Scotch and Scotch-Irish, from Ulster, who, like the natives of Scotland, are fed in their early years with at least one meal a day of good milk and good oatmeal porridge. — *Pacific Medical and Surgical Journal.*

Gleanings from Our Exchanges.

THE CANTOR LECTURES ON ALCOHOL.

From the London Lancet, April, 1875.

THE last of six Cantor Lectures on the subject of Alcohol, its action, and its uses, was delivered by Dr. Richardson before the Society of Arts, on the 1st of February. Cantor, after whom the lectureship is named, was a member of the profession of physic, and left what may be called an Endowment to the Society of Arts, to be expended on some one or other of the useful purposes of that active and eminently serviceable public body. This session it was determined by the Council of the Society to invite public attention to the subject of alcohol and its influence on the health of the community. To be informed what effects alcohol produces on animal life was the object had in view; and, to carry this out, the council sought naturally for their lecturer a member of our body who, belonging to no particular community of reformers, and pledged to the support of no sectarian advocacy, should be able to speak with authority.

That the Society has in this measure taken a correct view is proved by the great interest that has been excited by the course of lectures now concluded. The subjects discussed have little direct reference to politics. Except in the opening sentences of the first lecture, when the lecturer touched on the one hundred and seventeen millions of money invested in the trade of alcohol in the United Kingdom, all political allusion was studiously avoided. The physician, he said, equally with the prelate and legislator, has a claim to be heard on a matter which essentially concerns the vital interests of the people; but, as the physician must restrict himself to the physiological side of the question, he cannot expect to receive the same degree of general attention as falls to the lot of more popular and favored speakers. The result has possibly for once corrected this expectation.

The subjects that have been prominently brought forward in the lectures include many in which the profession as well as the public feel an interest. The first lecture was an historical picture of the history of wine and spirit, of the origin of the processes of distillation in the laboratories of the experts of the Middle Ages, and of some additional notes on the general uses to which wine and its spirit have been applied in the service of man. The second lecture treated on the position of common or ethylic alcohol in the series of alcohols, and on the physiological action of the heavier alcohols, butylic and amylic. The third lecture described the primary physiological action of ethylic alcohol. The fourth was devoted to the question, Is alcohol food? The fifth and sixth directed attention to the physical deteriorations and mental alienations which follow the systematic and excessive use of alcoholic spirit.

The argument of the lecturer on the question advanced in the fourth lecture—Is alcohol food?—led to a negative answer, while at the same time it admitted the validity of the statement so powerfully enforced by the late Dr. Anstie, viz., that alcohol is disposed of in the living body by other processes than simple, direct elimination. This view, however, that alcohol is chemically changed within the organism, was not admitted as any proof in favor of the assumption that the substance becomes in any sense a

food. The evidence was considered conclusive that alcohol is not a builder of any tissue whatever, probably not even of fatty tissue. It therefore either becomes a food as an agent which supplies force, or it is no food whatever. If, by oxidation, it be consumed like a heat-giving food, the evidence of the fact ought to appear in the experiment of its administration. Does the evidence appear? To the solution of this question Dr. Richardson brought to bear the many facts at his command. He re-affirmed the statement originally made by him, from experimental observation, in his report to the British Association at Birmingham in 1866, that the general effect of alcohol is to reduce the animal heat. In the first stage of alcoholic excitement the external temperature of the body is slightly raised, and in the confirmed inebriate this primary elevation of temperature may be distinctly marked. But the effect is held to be due, not to a greater combustion, but to a quicker loss of temperature. It is, in truth, a process of cooling; it is from the unfolding of the larger sheet of the warm blood in vessels partly paralyzed by the alcohol, and from the quicker radiation of heat from that larger surface. During this stage the internal temperature is declining, the expired air from the lungs is indicating the first period of reduction in the amount of carbonic acid, and the reddened surface of the body is so reduced in tone that cold applied to it increases the suffusion. It is this most deceptive stage that led the older observers into the error that alcohol warms the body. In the second and third stages the temperature declines, falling below the natural; and, as the fourth stage is approached, it reaches a decline that becomes actually dangerous. This reduction is marked in some degree in proportion to the depth of the coma that follows the intoxication. With the first conscious movements of recovery, there is a faint rise of temperature, but such is the depression that these very movements exhaust and lead to a further reduction. In extreme instances so long a period as three days is required to bring back a steady natural return of the animal warmth. Through every stage, therefore, except the first, the special action of alcohol is to reduce the animal temperature. In fact, cold and alcohol act in the same manner on the vital processes. Both paralyze the vessels of the minute circulation; both lead, therefore, at certain stages of their action, to suffusion of the surface of the body, and both reduce power. In proof of this, it was shown that if two warm-blooded animals are placed asleep in the same air, brought to a low degree of temperature, the one animal charged with alcohol, the other free of the agent, they are differently affected. They both sleep under these circumstances; but the alcoholic sleeps to die; the other simply sleeps more deeply than is natural, and lives so long as the store of food it is charged with continues to support life. Within this bond it awakes in a warmer air uninjured, though the degree of cold be carried even to the degree of freezing of the extreme parts. To this evidence is added the fact that the amount of carbonic acid excreted by the animal that is under alcohol is decreased.

From all these facts the inference is that the alcohol is not burned after the manner of a food which supports animal combustion, but that it is decomposed into secondary products, by oxidation, at the expense of the oxygen which ought to be applied to the natural heating of the body.

These conclusions respecting the action of alcohol on the animal temperature were backed up by another series of observations, in which the effect of this substance was traced on the muscular power. Here it was shown that just as the animal heat is reduced so is the excitability of muscle, until at last, as narcotism is developed by the spirit, the muscular power is brought down to the extreme of prostration.

The practical deductions from these observations accord with the modern experience that is now being gained under the new light by which this

subject is surveyed. To the professional mind the facts have for some time past been gradually developing, and have afforded striking evidence of the value of properly conducted experimental research. To the public mind they are, however, new, and are so opposed to the preconceived ideas and the false experience of the past that they are startling in their novelty. So much the more important is it that the public should be correctly informed of the progress of medical science on matters which so greatly concern the general welfare. Legitimate medicine never flourishes so healthily as when an intelligent public appreciation of its labors and its knowledge is manifested and encouraged. We have touched, on the present occasion, on one point only in these lessons communicated to the Society of Arts. We shall return to them in a future number.

GENESIS ACCORDING TO SCIENCE (SO CALLED).

From the Canada Lancet.

WE cannot resist giving our readers the amusement — though the feeling excited will probably be by no means one of unmixed amusement—of reading the following smart concrete statement of some modern "scientific" schemes of creation from one of our Trans-Atlantic contemporaries:

THE NEW SCRIPTURES ACCORDING TO TYNDAL AND OTHERS.

1. Primarily the Unknowable moved upon cosmos and evolved protoplasm.

2. And protoplasm was inorganic and undifferentiated, containing all things in potential energy; and a spirit of evolution moved upon the fluid mass.

3. And the Unknowable said, Let atoms attract; and their contact begat light, heat and electricity.

4. And the Unconditioned differentiated the atoms, after its kind; and their combinations begat rock, air and water.

5. And there went out a spirit of evolution from the Unconditioned; and, working in protoplasm by accretion and absorption, produced the organic cell.

6. And cell, by nutrition, evolved primordial germ, and germ developed protogene, and protogene begat eozoon, and eozoon begat monad, and the monad begat animalcule.

7. And animalcule begat ephemera; then began creeping things to multiply on the face of the earth.

8. And earthy atom in vegetable protoplasm begat the molecule; and thence came all grass and every herb on the earth.

9. And the animalcule in the water evolved fins, tails, claws, and scales; and in the air wings and beaks; and on the land they sprouted such organs as were necessary as played upon by the environment.

10. And by accretion and absorption, came the radiata and mollusca; and mollusca begat articulata, and articulata begat vertebrata.

11. Now these are the generations of the higher vertebrata, in the cosmic period that the Unknowable evoluted the bipedal mammalia.

12. And every man of the earth, while he was yet a monkey, and the horse, while he was a hipparion, and the hipparion before he was an oredon.

13. Out of the ascidian came the amphibian and begat the pentadactyle; and the pentadactyle by inheritance and selection produced the hylobate, from which are the simiadæ in all their tribes.

14. And out of the simiadæ, the lemur prevailed above his fellows and produced the platyrhine monkey.

15. And the platyrhine begat the catarrhine, and the catarrhine monkey begat the anthropoid ape, and the ape begat the longimanous ourang, and the ourang begat the chimpanzee, and the chimpanzee evoluted the what-is-it.

16. And the what-is-it went into the land of Nod, and took him a wife of the longimanous gibbons.

17. And in process of the cosmic period, were born unto them and their children, the anthropomorphic primordial types.

18. The homunculus, the prognathus, the troglodyte, the autochthon, the terragen—these are the generations of primeval man.

19. And the primeval man was naked and not ashamed, but lived in quadrumanous innocence, and struggled mightily to harmonize with the environment.

20. And by inheritance and natural selection, did he progress from the stable and homogeneous, to the complex and heterogeneous; for the weakest died and the strongest grew and multiplied.

21. And man grew a thumb, for that he had need of it, and developed capacities for prey.

22. For, behold, the swiftest men caught the most animals, and the swiftest animals got away from the most men; wherefore, the slow animals were eaten, and the slow men starved to death.

23. And as the types were differentiated, the weaker types continually disappeared.

24. And the earth was filled with violence, for man strove with man, and tribe with tribe, whereby they killed off the weak and foolish, and secured the survival of the fittest.

"THE LEAST SACRIFICE OF PARTS" AS A LEADING PRINCIPLE OF SURGICAL PRACTICE.*

BY THOMAS BRYANT, F.R.C.S.

From London Lancet, April, 1875.

I PROPOSE, this evening, to draw your attention to what I believe ought to be a great principle of surgical practice, but to what I fear is not yet sufficiently recognized, or, if so, acted upon; I allude to the principle which, for the sake of pithiness and of practical use, I have called that of "the least sacrifice of parts." Explained more fully the principle is the one that forbids the surgeon to sacrifice more of the body than the absolute necessities of the case demand; that calls upon him to remove the disease that requires removal, but no more; that enables him in accidental surgery to make a flap for an amputation wherever he can, and in some cases to make no flap at all, but to leave the case to nature to repair; and, in pathological surgery, to cut through tissues infiltrated with inflammatory deposits rather than go above a joint, or take away more of a limb than the necessities of the case demand.

To enable me to illustrate this principle fully, I propose, therefore, to bring the subject before you in a series of propositions, each of which I hope to illustrate by cases and clinical remarks.

The propositions I hope to prove are as follows:

1. That in cases of disease or accident no more of the body is to be

* Read in part at the Medical Society of London, January 11th, 1875.

taken away than the necessities of the case demand.

2. That, to carry out this principle, the surgeon may, in *pathological amputations*, fearlessly divide tissues infiltrated with organized inflammatory products, and even cut through the walls of suppurating cavities, or through diseased joints.

3. That, in *accidental surgery*, parts irreparably injured are alone to be removed and no healthy tissues are to be sacrificed in order to perform a recognized and probably a named operation. That to these ends the surgeon ought to utilize even doubtfully viable integument, or even leave a stump to granulate, when, by so doing, some portions of the shaft of a bone can be left, a joint saved, or amputation above a joint avoided.

The first proposition—"That, in cases of disease or accident, no more of the body is to be taken away than the necessities of the case demand"—may at first sight appear a truism; and perhaps some of my hearers may be disposed to think that it is a rule generally followed. Observation, however, has taught me that such a conclusion would be far from correct, and that amputations and excisions of joints are often performed for local disease in cases from which the local disease could otherwise be removed, with far less risk to life, with an equal probability of securing a good result, and with the preservation of a limb or joint.

In the surgery of the foot or hand the truth of these remarks is well exemplified. For let me ask any hospital surgeon if it be not true that—in cases of disease of the metatarsal or tarsal bones and joints—we are too apt to regard any individual case as a good one for a Chopart's amputation, a Pirogoff's, or a Syme's, according to our own fancy or appreciation of the value of one or other of these operations; and if we are not too prone to forget that a good recovery of the foot may ensue on the removal of the diseased bone or bones without any amputation at all? And in support of this assertion I need do no more than quote the able advocate of Syme's amputation, as given in Holmes' system of Surgery (2d ed., vol. v.), where he expresses his mature opinion, after much experience, "that Syme's amputation is calculated to supersede entirely that of Chopart, besides taking the place of amputation of the leg in the majority of cases supposed to demand it." I need hardly say that I entirely dissent from these views of the learned writer. I believe that for local disease alone no form of amputation of the foot should be entertained until less severe measures have been employed and failed; that when amputation is called for, the minimum amount of foot should be taken away; that when a Chopart's amputation will suffice, a Pirogoff's should not be thought of; that when a Pirogoff's is applicable, a Syme's should not be entertained; and that an amputation of the whole foot is never to be undertaken when the disease can be removed by a less severe measure; for I cordially agree with Mr. Hancock when he asked the question, in his college lectures, "If anything can be more unphilosophical than to advocate the sacrifice of any bone or joint of the foot for no other reason than that a particular operation should be performed."

To the surgery of other parts these remarks are applicable; for do we not often see fingers amputated, and even thumbs removed, in cases of injury that, if left to nature, would very often be saved, in order that the surgeon may make a clean amputation? Do we not see joints excised that might be saved by free incisions into the joint, or the removal of necrosed bone from the joint, and amputations performed above a joint or high up a limb in order that good flaps may be made? I do not say that these things are done so commonly now as they were, but I do say that they are done far too frequently, and I believe such errors are committed because surgeons are not sufficiently impressed with the great principle of operative surgery that I have just enunciated—that of "the least sacrifice of parts."

ON METRO-PERITONITIS, FOLLOWING THE USE OF THE ORDINARY FEMALE SYRINGE: A PLEA FOR THE VAGINAL IRRIGATOR.

READ BEFORE THE OBSTETRICAL SOCIETY OF DUBLIN, FEBRUARY 13TH, 1875,
BY THOMAS MORE MADDEN, M.D., M. R. I. A.

From the Obstetrical Journal of Great Britain and Ireland, April, 1875.

THE use of the vaginal syringe is the most common, and, until recently, was almost the only local treatment resorted to in uterine disorders. As this instrument is now so generally employed in all cases of real or suspected disease of the womb, that is to say, in nine-tenths of the complaints peculiar to women, and as it is freely ordered by medical men and habitually used by patients without any special caution or apprehension of possible danger, the following case appears to me not unworthy of the consideration of this Society:

Mrs. W., a healthy young lady, aged twenty-four, was delivered on the 16th of July, 1874, of her first child. The labor, which was very tedious in the first stage, was rendered difficult by rigidity of the os uteri and malposition of the child's head, and had to be completed with the assistance of my long forceps, an instrument of a peculiar construction which I have elsewhere described.* Her convalescence presented nothing remarkable. On the 24th of August she called on me, complaining of pain in the back, a profuse yellow leucorrheal discharge, and a distressing bearing-down sensation, which prevented her from walking, or even standing with any comfort. The vagina was congested, the os patulous, and the uterus slightly prolapsed and enlarged. Absolute rest was enjoined, a tonic prescribed, and she was directed to use an astringent vaginal injection.

A few nights afterwards I was sent for, but being out of town, Dr. Egan, of Talbot street, saw her, and found her suffering from intense uterine colic, which had come on during the use of the injection when going to bed a couple of hours previously. She was then cold, almost pulseless, and apparently semi-moribund. Having promptly administered stimulants and applied sinapisms over the heart, etc., Dr. Egan, as he subsequently informed me, considered her condition so precarious, that he called in the assistance of Dr. Johnston, in consultation; and owing to the efficacious measures adopted, the most urgent symptoms were abated, the warmth was restored to the extremities, the pulse became apparent at the wrist, and the severe uterine pain was for the time considerably relieved.

On the following morning, I visited her with Dr. Egan, who kindly left the case in my care, and found her still in a state of extreme prostration, and again suffering from frequent paroxysms of violent uterine pain and almost continual retching, with great tenderness over the abdomen, and especially over the uterus, which was as large and hard as it should be immediately after delivery. Her pulse was 140, and so weak that it could hardly be counted; her respiration was sighing; countenance pale and anxious, and the skin cold and clammy.

Poultices and anodyne stupes were applied to the abdomen; hydrocyanic acid draughts were given to allay the retching, and her strength was supported by enemata of brandy and beef-tea, with small doses of liquor opii. I again saw her the same evening; the incessant sickness and uter-

* Vide *Lancet*, June 20th, 1874.

ine pain continued; she was suffering from constant thirst, but no sooner did she take any fluid, or even a piece of ice, than it was immediately rejected. She was ordered therefore to take nothing whatever by the mouth. A drop of hydrocyanic acid was added to each enema, and the expedient (which I have not seen alluded to by any writer) certainly diminished, though it did not stop the vomiting. Notwithstanding the great depression of the pulse, the local uterine inflammation was so marked, that I applied a few leeches over the seat of pain, and this gave considerable relief to the suffering, whilst the pulse actually became feebler and less compressible than before their application. Besides this, the solution of muriate of morphia was used hypodermically to relieve pain and calm the nervous system, though no sleep was induced by it.

On the 31st, the metro-peritoneal pain had in great measure subsided, but there was yet considerable tenderness over the uterus, which continued to be perceptibly tumefied. Her pulse was 140 in the minute, weak and compressible; tongue dry and furred; decubitus dorsal, and sunk down to the back of the bed, and she was still suffering much from the constant nausea and dry retching. The same treatment was pursued as on the previous day.

September 1st.—She had slept a little last night; her pulse had fallen to 120, and the uterine tenderness was much less than yesterday; the retching and inability to take any nourishment or medicine by the mouth, though less marked, still continued. I suggested a consultation. Dr. McClintock accordingly saw her with me that afternoon, and I had the satisfaction of having my view of the case confirmed by this eminent gynecologist, who, in addition to the treatment already referred to, advised oxalate of cerium, in small doses, every third hour, and Dr. Halahan's egg drink to check the retching.

September 2d.—The egg drink, in teaspoonful doses, had agreed with her, and the oxalate of cerium pills, which at first had been rejected, were now retained; it was necessary, however, to continue the enemata, etc., as before, though she gradually improved each day until the 5th, when she was able to take a little iced chicken jelly by the mouth, and from this time her recovery was rapid, so that on the 11th she was able to sit up for a couple of hours, and was soon convalescent.

In the foregoing case, the uterine colic and subsequent metro-peritonitis followed so immediately on the use of the vaginal syringe as to leave no room for any doubt of their being caused by the fluid having been injected through the patulous os into the uterus, and probably also by some of it having passed through an enlarged or dilated Fallopian tube into the peritoneal cavity.

The probability of an accident of this kind attending the use of the ordinary female syringe is practically ignored by the great majority of gynecologists; yet cases similar to mine, although somewhat rare, have been recorded by other practitioners; but they would appear to have made less impression on the minds of those engaged in this branch of medicine than the importance of the subject demands.

Dr. Tilt says: "Only once have I been led to believe that the patient injected some portion of the fluid into the cervical canal. A lady was suffering from chronic uterine inflammation; the womb was low and slightly retroflected; the os uteri patulous; and after injecting a solution of acetate of lead, as the patient thought, in the usual way, she was suddenly seized with severe uterine pains, rigors and intense cold. She got better when in bed, by means of abdominal poultices and hot drinks, and no bad consequences followed this attack." *

Dr. J. H. Bennet says: "When disease really exists in the uterine

* Dr. Tilt's "Handbook of Uterine Therapeutics." Third Edition. P. 54. London, 1868.

cavity, the injections would, no doubt, do much good, and were they safe, would be preferable to the solid nitrate of silver applied with the porte-caustic; but there is reason to believe that uterine injections are not safe, and I do not now resort to them. Several deaths occurred in Paris during my residence there, from metro-peritonitis, brought on by their use. One took place in the female ward of M. Jobert, in the Hospital St. Louis, and under my care, as I was then his house-surgeon. The patient, a fine healthy young woman of twenty-four, was afflicted with a large fibrous tumor of the uterus, which had much developed that organ, and had, no doubt, opened the os internum. M. Jobert was at that time trying the effects of the so-called uterine injections, and injected one astringent injection into the cervical canal of this young female, there being a slight muco-purulent discharge from the os. Shortly after she was seized with rigors, fever, and severe abdominal pain, and in a few days died of peritonitis. I performed the post-mortem and found nothing but the lesions of peritonitis, and the ovarian tumor embedded in a womb developed to the size which it presents in the fourth month of pregnancy. The fluid of the injection must have penetrated freely into the uterus, through the open os, and thence have passed along the Fallopian tube into the cavity of the peritoneum, thus causing fatal peritonitis."†

M. Bernutz relates the history of a case of peritonitis "which resulted immediately from the administration of a cold vaginal douche."‡

These three quotations are the only references that I have met with to the dangers which may follow the use of the ordinary vaginal syringe, and the paucity of similar observations is certainly a fair argument that the accident in question is by no means frequent. Still the mere possibility of such serious, or even fatal results, being thus produced, should, I think, render gynecologists more cautious than is generally the case in their recommendation of this almost universally-employed and much-abused instrument. For my own part, I have been long convinced of the inconvenience of the vaginal syringe in ordinary use, as well as of the possible ill effects of its misapplication. Some years ago I pointed out in this place how uncertain and undue might be the force with which injections can be thus thrown into the vagina or into the uterus, and I endeavored to show that, even when not positively injurious, this instrument must necessarily be imperfect in its action, and inconvenient in its use. To produce any permanent beneficial effect by injections, in a case of congestion or inflammation of the cervix uteri for instance, the injected fluid must be kept in contact with the inflamed or congested part for a certain fixed length of time, and at a certain unvarying degree of heat, without any sudden alternations in either its temperature or the force with which it is impelled. None of these intentions can be carried out when the common siphon syringe is made use of, as the fatigue of working that instrument, and the position of the patient, which is so irksome during its employment, effectually prevent its being used more than a few minutes continuously. Moreover, the injected fluid is sent by it into the vagina in irregular intermitting jets, the force of which is directed against the inflamed part with a degree of violence that may be injurious, or of weakness that may be utterly ineffective, and which is regulated by the strength or patience of the operator, rather than by the necessities of the case. In order to obviate these difficulties, various forms of utero-vaginal syringes, douches, and irrigators have been devised. It may be in the recollection of some present, that a couple of years ago, I exhibited a very simple,

† "On Inflammation of the Uterus and its Appendages." By J. H. Bennet, M.D. Fourth Edition. P. 146. London, 1861.

‡ "Clinical Memoirs on the Diseases of Women." By MM. Bernutz and Goupil. Translated by Dr. Meadows. Vol. II. P. 78. London, 1868.

and, I believe, very effective instrument, for the same purpose before the Society. The irrrigator in question* (a description and drawing of which may be seen in the second volume of our proceedings, p. 183), is one I have now used for some years, and which, without asserting that it is in any way superior to other instruments of the same kind, I have found more generally useful than the ordinary syringe. With this irrigator, the accident which forms the subject of the present paper, could not have occurred, as it is merely a siphon, so constructed that it can be set in action, or stopped in an instant at the will of the patient.

It has, moreover, the great advantage of being very portable; may be readily used whenever a vessel of water can be obtained; is capable of sending a gentle continuous current of water, plain or medicated, and at any temperature, into the vagina, or even into the uterine cavity itself, if ever that measure—rarely required in gynecological, as distinguished from obstetric practice—should be considered expedient, and this, too, in any position, sitting or recumbent, and for any length of time that may be advisable, without causing the slightest fatigue to the patient. The advantages of the irrigator over the common syringe, I have proved by experience during the last few years, and the comfort and benefit which those patients who have employed it have derived from its use, would lead me to recommend any gynecologist who has not hitherto done so, to give a trial to the irrigator as a substitute for the vaginal syringe in most cases. This instrument is not only effective and easily used, but is also easily constructed. Dr. Graily Hewitt, Dr. Kidd, and several others, have recommended and devised irrigators which many would, perhaps, prefer to the one I have brought before this Society. But it is in the power of anyone to convert an ordinary vaginal syringe into an excellent irrigator by the mere addition of two pieces of india rubber tubing and a small stopcock to it. These may be attached to any syringe, which may be thus made, perhaps fully as effectual as the most complicated instrument that could be devised for the purpose.

In another point of view, cases such as those just referred to, appear to me of some interest, namely: as to their bearing on the recent discussion as to the safety of strong astringent injections into the uterus immediately after delivery, in order to arrest hæmorrhage. Against this practice, it has been urged that there is danger of forcing the injected fluid through the open uterine sinuses into the circulation, or through the Fallopian tubes into the peritoneal cavity, thus causing, in the former case, death from embolism, and in the latter giving rise to fatal peritonitis. As on a former occasion, when this subject was under the consideration of the Obstetrical Society, I expressed a strong opinion against the probability of such an accident being thus produced, I feel bound to say that the case I have now related has, to some extent, modified my views on this point. For if metro-peritonitis may be occasioned, as it was in this instance, by a fluid injected into the uterus five weeks after delivery, it is obviously much more probable that a similar effect might be thus occasioned immediately after parturition, when the uterine vessels and passages are so enlarged and pervious. But I should also add that the possibility of such an accident does not in the least alter my opinion of the utility of the powerful styptic brought into midwifery practice by Dr. Barnes, nor would it deter me from again resorting to the injection of the solution of perchloride of iron in any case of post-partum hæmorrhage which could not be otherwise controlled.

The President observed that Dr. Madden's brief paper opened up a very important subject for discussion. He did not think the occurrence of uterine colic following the injection of fluids by the syringe, was a very rare occurrence, inasmuch as he had seen

* Made by Whyte, Upper Sackville Street, Dublin.

three cases of it in his own practice. In one case only a few drops of glycerine were injected into the cavity of the uterus, as recommended by Dr. Marion Sims, and it produced most intense colic, but no peritonitis or endo-metritis followed. Some two years ago he was called, late at night, to see a patient whom he had directed to use a weak solution of borax injected into the vagina with an ordinary syringe. He found her in a state of collapse, suffering from pain referred to the uterus, and sickness of stomach. Her symptoms were speedily relieved, and no inflammation followed; while a less severe attack occurred in a patient who used tepid water only. He thought these cases in which the injection of a fluid into the uterus was followed by colic, were far from being of very rare occurrence, and he advised that the central hole in the nozzle of the syringe be stopped, as a means of preventing this accident. He did not think, however, that the data given by Dr. Madden carried out his theory that the fluid passed into the Fallopian tubes, and thence into the peritoneum. The phenomena in Dr. Madden's case might be explained by the occurrence of a severe attack of endo-metritis in the first instance, followed by peritonitis. The exact same train of symptoms which Dr. Madden had described—the prostration, collapse, and vomiting—occurred in a patient where he (the President) had swabbed out the uterus with perchloride of iron. The patient was suffering from profuse hæmorrhage occurring some weeks after abortion; the os was patulous, and he had no difficulty in passing a pledget of cotton, saturated with the styptic, into the uterus; this was followed by a train of symptoms exactly similar to those Dr. Madden had described, but it was impossible that the fluid was passed through the Fallopian tubes. Certainly Dr. Madden was quite right in saying that vaginal injections were not perfectly free from danger. He (the President) greatly preferred a douche, similar to that spoken of by Dr. Madden, to the use of a vaginal syringe, and he had recently (acting on the suggestion of Dr. Emmet, of New York,) carried out that plan extensively. Dr. Emmet advocated strongly this vaginal irrigation with water, varying from 95° to 105° of temperature. He based his treatment on the analogy that existed between the effects produced by it and an ordinary linseed poultice, or other hot application, applied to the skin. He says: If you leave a linseed poultice on for some time, the skin becomes corrugated and white, showing that, though the first effect of the warmth was to attract the blood to the surface, this was followed by contraction and diminution in size of the calibre of the blood-vessels. He (the President) did not think this analogy held good, for, in the case of the application of a poultice four or five hours elapsed before bloodlessness of the part occurred, while the vaginal douche could hardly be prolonged over fifteen or twenty minutes. Therefore, although considerable benefit followed in many cases from the hot vaginal douche, he did not think the theory was quite correct. To use the vaginal douche efficiently, it was necessary that the hips be raised higher than the shoulders, so that the vagina may be distended with the fluid; that the stream of fluid should be continuous, and that it should be kept up to an equal temperature. He (the President) had tested this method extensively. In a case of metritis, where the temperature of the water was raised to 110°, the patient derived much benefit. In another, a case of vaginitis, the patient had been subjected previously to treatment of various kinds without benefit. Two gallons of water, temperature 105°, were used twice daily. She derived the greatest relief, and was, in fact, cured by it. The great difficulty in carrying out this treatment, where a large quantity of water necessarily is used, was that the bed-pan on which the patient lay had to be emptied constantly. To obviate that difficulty he had introduced the plan of attaching a tube to a bed-pan of peculiar shape, by which

means the water was carried away. The pan must be placed on a firm surface, and, if this precaution is taken, no trouble whatever is experienced in using it. The water for the douche should be contained in a case such as that used by surgeons for irrigation, and be raised to the height of a few feet above the level of the couch or table on which the patient rests.

HETEROPLASTY.—M. B. Anger has communicated to the Academy of Sciences of Paris a paper wherein he mentions that he has succeeded in transplanting large pieces of skin taken after recent amputations, upon large ulcers and extensive losses of substance after burns. This he calls hetoroplasty. The author uses the whole thickness of the skin, and takes care that the temperature of the part to be transplanted be not low. In fact he has laid patients side by side so as to convey the skin of one without the least delay upon the ulcer of the other. M. Anger is very careful to say that the general health of those patients who furnish skin should be thoroughly investigated before the operation.—*London Lancet.*

Obituary.

THE LATE DR. ADDISON NILES.

DIED, at his residence in Quincy, Ill., April 5th, 1875, Dr. ADDISON NILES, aged 63.

Dr. Niles was born at Plattsburgh, Steuben county, N. Y., April 26th, 1812. He commenced the study of medicine while young, though exactly at what date, cannot now be remembered; but he studied and practiced with his father, Dr. Noah Niles, for some years before graduating. He first attended lectures in 1833–4, at the medical college of Geneva, N.Y., where he graduated in 1835, after attending two courses. He subsequently attended another course at Geneva, in 1845–6; and during the following winter (1846–7), we find him at Jefferson Medical College, Philadelphia. He resided in Plattsburgh, Avoca, and Bath, of Steuben county, N.Y., until 1855, when he removed to Lockport, in Niagara county. Finally, in November, 1861, he removed to Quincy, Ill., at the solicitation of friends residing in this city, where he resided, engaged in a busy practice until his death, which occurred on the evening of April 5th, 1875.

Dr. Niles may be said to have lived solely in and for his profession, to which he was thoroughly and devotedly attached; few — of his medical friends, at least—ever heard him discourse upon any other subject. He was an indefatigable laborer in the cause of science, and possessed probably the largest and best selected medical library in this section. He had been, in former years, a contributor to some of the medical journals, and there is little doubt that he left a large amount of manuscript in the form of notes, essays, etc., which being founded on

the experience of over forty years of practice, and containing in all probability, many peculiar and original ideas, cannot but be of interest; and as the doctor's son, Mr. John W. Niles is engaged in the study of medicine, it is to be hoped that these valuable papers may not be allowed to rest in oblivion.

In his intercourse with his professional brethren, Dr. Niles was somewhat reserved; though courteous to all, he cultivated but few friends or intimate acquaintances, but he was highly respected and admired by those who knew him. To his patients, and especially to those of the poorer class, among whom he had many, he was ever kind and tender; the numbers that filled St. Peter's church at the funeral service, would alone suffice to tell in what esteem he was held by those who attended the last sad rites.

Of his last illness, but little is known, for with his habitual reserve he consulted none, and refused all aid; when his family, alarmed by his condition, requested counsel, those who were called, arrived but to find him on his dying bed. An autopsy held the following morning, revealed extensive organic lesions, that had probably existed for many years; a full account of this will be given by Dr. M. Rooney, in a report to the Medico-Pathological Society.

The loss occasioned by the death of Dr. Niles, will long be felt, and more especially by the Fellows of the Medico-Pathological Society, of which he was one of the founders, and in which he was an ardent and enthusiastic worker. May his memory serve to stimulate his surviving Fellows, to renewed and never-failing exertion in the path which he so lately trod, and in the labors from which he is now at rest.

At a special meeting of the Medico-Pathological Society of Quincy, Illinois, held this day, the following preamble and resolutions were unanimously adopted:

"WHEREAS, We have learned with profound sorrow, of the death of DR. ADDISON NILES, one of the original Fellows, and a past President of this Society; therefore

"*Resolved*, That in his death, we mourn, in common with the entire medical profession of the city and county, the loss of one whose untiring devotion to science might well be held up as an example to his Fellows; whose unbending integrity commanded our fullest respect, and whose unfailing courtesy in all his professional relations, had won our highest esteem.

"*Resolved*, That we tender to the family of the deceased, that sympathy which comes from hearts suffering with them a common bereavement, and cherishing with them the honored name of him who has gone before."

It was ordered, that a copy of the above resolutions be sent to the family of the deceased, and that they be published in the Quincy *Whig* and *Herald*, and in the Chicago MEDICAL EXAMINER; also, that they be inscribed on the memorial pages of the Society's records, with such facts as may serve as a synopsis of the medical history of the deceased.

L. H. COHEN, M.D.,
Secretary.

QUINCY, Ill., April 6th, 1875.

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Original Communications.

IRRIGATION IN A RECENT WOUND.

BY CHARLES HERVEY HUNT, M.D., STANWOOD, IOWA.

CHARLES A. P., who was yard-master of the railroad at this place, while attempting to jump upon the pilot or cowcatcher of an engine, had the misfortune to slip, bringing his foot between the pilot and the rail. The space in which the foot was caught, was afterward ascertained by running the engine over the same place, and was found to be about three-fourths of an inch. The foot, upon examination, presented the appearance of a foot that had just come from under a trip-hammer. The bottom of the foot was burst open from the ball of the heel to the great toe, so that all the metatarsal bones, and the tendons, could be seen. The ball of flesh under the first toe was split off. Branching off from the main rent, was one that extended up between the fourth and little toe to the top of the foot, then across to the inside of the foot.

Fortunately, no bones were broken, except a piece from the metatarsal of the small toe at its articulation with the phalanx. The patient was put under the influence of an anæsthetic, and the wound was cleansed of blood and dirt, and dressed in the regular manner. As soon as the effects of the anæsthetic were gone, the pain returned with great severity. Anodynes did not seem to have any effect. At this point, the use of cold water occurred to me. A large tub was brought in with a pail of water drawn from the bottom of the well. The bandages were nearly all removed, leaving the adhesive straps so that the water could come in contact with the flesh. A thin cloth was laid over the foot, and upon this the water

was poured in a stream, about the size of a pipe-stem. Within a few moments the pain began to abate, and in twenty minutes the patient was resting easy. This was kept up all night, and on my visit in the morning, the pouring of the water was still going on. Whenever it was stopped for a few moments, the pain returned, and the relief obtained by the use of the water was so great, that the patient would not allow it to be stopped; and agreeable to his wish, it was kept running night and day for one week, when its use was discontinued, as the pain had nearly ceased.

There was no sloughing, and the discharge was small. The swelling was not more than one-third as much as there would be in such a wound where other means are used, and it did not extend above the ankle. After the use of the water was discontinued, the ordinary dressing of carbolized oil was used. The recovery was rapid, and the foot, with the exception of a partial stiffness in the first toe, is as good as ever. I have found but little said in our text books on surgery, upon the use of water in wounds, fractures, dislocations or sprains. In these cases, it seems to me that the great object to be obtained is, the prevention of the congestion of the parts, which is followed by swelling and exudation, and I know of nothing that will do it more effectually than cold water applied continuously. A little ingenuity on the part of the physician, will be all that is necessary for the making and arranging of apparatus for holding and conveying water to the part. I believe with the professor who says "give us plenty of fresh air," but give us also, plenty of cold water.

A CASE OF SUPPOSED HERNIA PROVEN BY POST MORTEM TO CONTAIN BILE AND PUS.

BY U. P. STAIR, M.D., BLACK EARTH, WIS.

H. M. W. died on April 8th, 1875, of what was diagnosed to be cancer of the stomach. He had, during the latter years of his life, a small, fluctuating tumor in the epigastric region, about half way between the umbilicus and the ensiform cartilage, This enlargement was about the size of a large almond, and at times it gave to the touch a sensation as though it contained air mixed with liquids. Several physicians who examined it pronounced it a hernia, but what its contents were remained a mystery. An autopsy was held on the 10th ult. There were present Drs. Field, of Sun Prairie, Wis., U. P. Stair, of Black Earth, T. F. Stair, of Mazomanie, and J. B. Stair.

Two incisions were made, following the lower margin of the ribs, beginning at the epigastrium, intersected by another drawn from the latter point to the pubis. When the two triangular flaps were thrown back so as to disclose the stomach, it appeared to

be a complete mass of cancerous growth. Upon closer inspection it was found to extend from the pyloric orifice of the stomach around the greater curvature to the spleen, involving that organ with the pancreas, duodenum, and passing through the coats of the stomach, thus uniting these organs into one combination of carcinomatous formation. The stomach was, of course, very much contracted in size by the deposit in its walls, especially throughout the greater curvature. The pylorus was almost entirely closed. From the peculiar character and consistence of the tumor, it was decided to be a cancer of the colloid variety.

The gall-bladder was largely distended, showing that there was obstruction to the free passage of bile. The *round ligament* (umbilical vein in the fœtus) which extends from the notch in the anterior border of the liver to the umbilicus, was found to be strongly adherent to the abdominal tissues at the site of the tumor above mentioned. It was also pervious and filled with bile. The adipose tissue beneath the cuticle in this situation was found largely infiltrated with biliary pigment, a condition not detected upon any other part of the body, showing that it must have been communicated in *some* way through the parietes of the abdomen in that circumscribed locality.

It might be well to state that one point of diagnosis, in the supposition that it was hernia, was the peculiar crepitation caused by the presence of air and liquids. Dissection proved that there was, indeed, liquid contained therein. Air was doubtless present as well. Where did it come from? That the round ligament was hollow and pervious was plainly revealed by section, and also that it contained bile and pus, as did the sac of the supposed hernia. Now could it be possible that air could arrive at and occupy the sac with these liquids from the duodenum by means of the gall-ducts?

Circumstances prevented minute dissection of the tissues in the region of the gall bladder and ducts.

QUADRUPLETS.

NOTES FROM PRACTICE OF J. J. SCHNECK, M.D., MT. CARMEL, ILL.

WAS called at 10 A.M. May 2, 1875, to attend Mrs. Silas Andrus; a woman somewhat below the medium size; sandy complexion; aged thirty-eight years; eighth accouchment; American; and was given the following history:

She had regular menstrual returns until the first of December, 1874, the last three times not being in normal quantity; felt motion for the first time about the first of February, 1875; had felt as well as usual when in the pregnant condition, but thought herself much larger than in previous pregnancies at the corresponding stage.

At 5 A.M., labor pains commenced; at 11 A.M., the first child (a female) was born; and in twenty minutes, a

male child was expelled; both vertex presentations. Efficient labor pains now ceased until 1½ P.M., when, after the administration of 1½ drachms of fl. ex. ergot, in three doses, one-half hour apart, and abdominal friction, pains again commenced, and a third child (female) was born; followed by a male child in fifteen minutes; both podalic presentations.

In a few moments the placenta was passed; this was of an oblong shape, and attached to it were four umbilical cords, in as many separate sacs, which were variously adherent to one another as they approached the placental surface. The children are all of about the same size and weight, weighing near two pounds each, and have the appearance of having reached between the seventh and eighth month of fœtal life. The first child born lived twenty-four hours; the other three died within thirty minutes of their respective births.

Neither of the parents have any near relatives that have had plural births.

Translations.

CLINICAL THERMOMETRY.

FROM THE "COMPENDIUM DER NEUEREN MEDICINISCHEN WISSENSCHAFTEN," BY DR. B. KRAUS.

Condensed and translated by Dr. H. Gradle.

PRECAUTIONS TO BE OBSERVED IN THE APPLICATION OF THE THERMOMETER.

ON resorting to the axilla as place of application, the gathered perspiration must first be removed, and the skin dried. If now the axilla be firmly closed, the time in which the mercury reaches its highest point, is, as Liebermeister has shown, reduced to three or four minutes. The supine position is not indispensable, as long as the patient is in a position permitting of proper application and inspection of the thermometer, though it is often preferable. The instrument is now slightly warmed by grasping with the hand, hereupon inserted, and the axilla closed by pressing the arm against the chest; if the patient is restless or somnolent, or even much emaciated, it may be necessary to support the instrument with the hand, or at least to observe that it is kept in place. The mercury reaches its acme rarely under ten minutes, sometimes not before twenty minutes. If precision is desired, it may be necessary to allow the thermometer to remain in place for a few

minutes, even after the maximum is attained. Duclos considers the temperature indicated by the thermometer as correct, if it remains stationary in a uniform external temperature; a rather hazardous statement, as the animal temperature may change steadily. Alvarenga keeps the instrument in place for fifteen minutes, and registers the temperature three minutes after the mercury ceases to rise. ("Grundzuege der allg. klin. Thermom. etc.," von Dr. P. F. Alvarenga. Aus dem *Portug. Uebers.*, von Dr. O. Wucherer, 1873.)

On measuring the temperature in the vagina or rectum, the well constructed, *oiled* thermometer ought to be introduced to the distance of about six centimetres. Thomas advises to heat the instrument previously to a temperature 1° to 2° above the point to be expected, enabling one to obtain a practically correct result in one-fourth to one-half minute.*

It is, of course, necessary to note all previous accidents which may have influenced the temperature, as violent pain, vomiting, defecation, hæmorrhage, perspiration, etc. Nor can we neglect to take record of the time of the day at every observation; an observation, however, of the external temperature, and atmospheric tension is not necessary for practical purposes. In summary, our data are only reliable if the thermometer adapts itself well to the parts explored, all cooling influences are avoided, the instrument is kept in place for twenty minutes, and the degree only noted sometime after the maximum has been attained.

* Of course, not applicable with self-registering instruments.

NUMBER AND TIME OF THERMOMETRIC OBSERVATIONS.

Under ordinary circumstances, it is advisable to register the temperature of different days at nearly the same hour, repeating this twice daily, preferably between 7 and 9 A. M., the time of the maximum, and 4 and 6 P.M., the period of minimum temperature. But if exacerbations and remissions occur at another time, the observations ought to take place accordingly.

In important cases, or when a special object is sought, the temperature must be registered every two to four hours, as in severe acute diseases, especially at first, in order to ascertain the time of exacerbations, besides in cases of doubtful diagnosis, or when deviations from the usual course occurs; in short, whenever anything strange is observed. If it is merely desired to follow accurately the course of the temperature in any disease, four to six observations should be made; for instance, at 7 to 8, 9 to 10 A.M.; 12 M.; 3 to 4, 6 to 7, 10 to 11 P.M.; and whenever any irregularity occurs, another observation may be made early in the morning.

When sudden changes of temperature occur in a disease, for instance, at a rapid crisis, or in intermittent fever, hourly, half-hourly, or still better, continuous record will illustrate the changes. This, however, cannot be demanded in private practice, but is necessary when the laws of a disease are to be determined.

GRAPHIC RECORD OF TEMPERATURE.

For the utilization of any sort of thermometric observations, it is indispensable to note the continuous record; but in order to take in the

course of the temperature at one glance, the graphic method is by far the best; in other words, the construction of tables giving the thermometric course in form of a curve.

In order to facilitate the reading, the table may be divided into the degrees of both the centigrade and Fahrenheit scale; the tables may be rendered more complete by the construction, also, of curves, of the frequency of the respiration and pulse, in different inks. If now important accidents, therapeutic measures, etc. are noted at their proper place, a complete history of the disease is thus obtained. (Here follows a description of the graphic tables of Duclos, Wunderlich and Alvarenga, with illustrations, for which we must refer to the original.)

PHYSIOLOGICAL TEMPERATURE AND ITS OSCILLATIONS.

The oscillations of temperature in the normal state are altogether minimal, and whether spontaneous or caused by extraneous influences, are always transitory. Whenever a deviation occurs in either direction, the corresponding reaction is not slow to appear. According to Wunderlich, the normal oscillations rarely exceed one-half degree C. in any one individual; in fact, this *stability of temperature is ordinarily a sign of health.* The same authority considers a temperature above 37.5° C. (99.5° F.) or below 36.25° C. (97.25° F.) as suspicious. Crampton probably was incorrect when he stated that a daily temperature of 99° F. or more indicated disease. Possibly, this may hold good for London. At any rate, Alvarenga found a good many individuals in Lisbon, who fared well at that temperature, or if subject to disease, the latter was of a chronic nature. Whenever the production of animal caloric is increased in the normal body, a corresponding augmentation of the loss does also occur, and besides the production itself is diminished for some time; if, however, the latter is depressed too much, the losses are correspondingly reduced; and again, if these are too low, the production of heat decreases likewise, while, if the opposite occurs, an augmentation of production is the result. As long as the body is in a state of health, every disturbance of this nature remedies itself.

The variations of temperature are, according to Alvarenga, either general or local, the mean normal temperature being 37° C. (98.6° F.) But while investigators do not all agree as to this number, the difference is extremely slight. Thus Davy states 37.33° under the tongue, 37° C. in the axilla; Despret, 37.9°; Roger, 37.2° in children; Wurtz, 37°, and in the axilla, 36.54°; Baerensprung, 37.8°; Billroth, 37.5° as average, and the limits from 36.3° to 37.9° in two hundred observations; Chisholm, 36.11° (average of sixty-seven individuals); Froehlich and Lichtenfels, 36.9°; Mignon, 37°; Robert Latour, 36.5° to 37.5° (average 37°); Maurice, 36.20°; Hardy, 36.5° to 37.5°, and in early childhood, 37.1°; Compton, 97.4° F., limits 95.5° to 98.5°; Hirtz, 36° to 38°; Anfrun, 37° to 37.5°; Wunderlich 37°, limits 36.25° to 37.5°; Jaccoud, 37.2° to 37.5°; Alvarenga, 37.27°.

Henry Roger found the following average in nine children: At birth, 36.14°; first to seventh day, 37.08°; four months to six years, 37.11°; six to fourteen years, 37.31°; which was an

average of 36.91° from birth to the fourteenth year, and from 37.2° to 37.17° from the first day until that period.

The temperature of internal organs is also yet a matter of dispute; Davy, Breschet and Bequerel consider the temperature increasing as the circulatory centre is approached; the warmest place being the left ventricle (Davy); but according to Cl. Bernard, the blood of the left ventricle is colder than that of the right side of the heart.* The skin is the coldest part of the body, on account of the constant loss by radiation and evaporation. According to P. Beer, its temperature varies between 32° and 37° C. Martin found the cutaneous temperature over the abdomen, 28° to 30° R. (95° to 98.5° F.); over the chest, 26.4° to 27.1° (91.4° to 93.2° F.); in the hand, 23.2° to 29.6° (84.7° to 98.6° F.); and at the foot, 16° to 27° (68° to 93° F.) Marey, Donders, and others claim that the internal temperature rises when the external temperature sinks, and *vice versa*.

The normal temperature may vary, though within narrow limits, according to different circumstances.

The influence of age can be seen from the following table by Baerensprung:

At birth, 37.08°; after birth, 36.95°; within the first ten days, 37.55°; until puberty, 37.63°; from 15 to 20 years, 37.39°; from 21 to 30 years, 37.08°; from 31 to 40 years, 37.11°; from 41 to 50 years, 36.94°; from 61 to 70 years, 37.09°; from 80 years, 37.46°.

The time of the day also is of some influence; during the day time, an increase; during the night, a decrease occurs. From a diurnal table by Baerensprung, we abstract the following:

The highest temperature of adults is observed in the afternoon, a few hours after eating, from 4 to 8 P.M.; the lowest after midnight, from 2 to 4 A.M. (36.31°); from 12 to 2 P.M. the temperature ranges at 36.65°; from 5 to 7 A.M. at 36.69°; the average from 12 P.M. to 7 A.M. being 36.55° C. The first maximum temperature occurs in the morning from 9 to 11 A.M. (37.26°); the second in the afternoon from 4 to 6 P.M. (37.26°); the first minimum is noticed at 5 to 7 A.M. (36.60°); the second, 8 to 10 P.M. (37.03°). From 7 A.M., the temperature rises until midnight, with the exception of a slight reduction before dinner, to sink again until 5 A.M., when a very slight increase is observed until breakfast.

Besides age and time of day, an influence is also claimed for the external temperature, the climate, and the seasons, but its exact value is not yet determined. Some claim that the temperature is about one degree higher in tropic countries; others (Edward) found no difference, not even any between summer and winter. An external temperature of 212° F., was not observed by Blagden to be of any influence on the animal heat. Another factor is muscular activity; but Baerensprung found that *cæteris paribus* sleep did not alter the human temperature, which Alvarenga explains by the absence during sleep of circumstances abstracting heat. A reduction in the quantity or quality of food results in a reduction of temperature, but only after the lapse of a few days. Sex, constitution and temperament, are not known to influence animal temperature in any manner.

[*To be continued.*]

* Bernard's researches are entitled to most consideration.

GLEANINGS FROM THE GERMAN.

By Dr. H. Gradle.

ON INTRODUCING NEEDLE ELECTRODES INTO THE HEART OF A DOG.

VULPIAN (*Arch. de Phys.*, 1874, p. 975–80) found the induced current to produce muscular tremors in both ventricles, changing, after four to five minutes, into fibrillary contractions until, after the further lapse of three to four minutes, a permanent diastolic arrest occurred. The result was the same, if the current had a duration of but one to two seconds, and it was not prevented by the use of chloral or curare. After the occurrence of the diastolic arrest, the cardiac muscle did not react to any excitation, direct or reflex. Neither section of the vagus, nor its paralysis by atropine, altered this result, which occurred also if only one electrode was inserted into the heart, the other being placed on some point of the cutaneous surface. Only on the use of weak currents did the irritability of the heart return. From this Vulpian concludes that the electric stimulus produces a spasm of the ventricles, preventing them from responding rhymthically to the impulses from the cardiac ganglia. This spasmodic contraction soon exhausts the irritability of the muscle. Vulpian therefore cautions the reader as to the feasibility of employing this method as means of resuscitation in man in cases of sudden syncope, for instance, from the use of chloroform.—*Centralbl. f. Chir.*, No. 15, 1875.

Desormeaux resorts to nitrate of silver after evacuation of the fluid in hydrocele, by introducing a stick of that substance through the canula of the trocar, and cauterizing the tunica vaginalis at several places. He claims a prompt inflammatory reaction, comparatively little pain, and perfect safety of the procedure. Also Maisoneuve and others are said to employ this method.—*Revue de Therap. Med Chir.*, 1875, No. 4.—*Centralbl. f. Chir.*, No. 15, 1875.

ALTERATIONS OF SENSIBILITY IN ARTICULAR RHEUMATISM AND THE ELECTRO-THERAPEUTICS OF THIS DISEASE.

(*Centralbl. f. d. Med. Wissensch.*, No. 17, 1874).

For some time Drosdorf has had occasion to observe at Prof. Botkin's clinic (St. Petersburg) the following peculiar phenomenon in acute articular rheumatism: The sensibility to the electric current is reduced very decidedly in this disease, although the pain produced by moving or pressing upon the inflamed joints is quite considerable. This fact appears to overthrow the hypothesis of physiologists that all impressions are perceived by one apparatus. This observation induced the author to study the changes in the tactile and thermic senses as well as the sense of pressure and pain in affected joints, noting at the same time the altered electro-cutaneous sensibility, and the influence of faradization on the temperature of the joints.

For the latter purpose the author employed the apparatus of Du Bois Reymond, with 10,229 turns on the

secondary coil with a Grove's element. One electrode consisted of a round copper disc of one and one-half inches diameter, the other a copper cylinder of somewhat smaller diameter, with sponge attached. The electrodes were moistened with a solution of common salt, and pressed against the skin. Thereupon the distance between the primary and secondary spiral was noted, giving the minimum (very weak current) and the maximum (pain). The faradization was continued for five minutes.

The tactile sense was determined by means of a pair of compasses after Weber's method, while the sense of pressure was studied by means of weights. In order to investigate the sense of temperature, the author placed upon the joint two metal discs previously dipped into water of different temperatures, ascertained with a centigrade thermometer. The temperature of the joints themselves was measured with a Geissler's thermometer, the reservoir of which consists of a narrow tube, bent on the horizontal plane and covered with a glass capsule, thus coming in contact with a larger surface than the ordinary instruments. The thermometer is slightly pressed against the skin, and in ten to fifteen minutes the mercury has attained its maximum height. In this manner Drosdorf examined several cases, and came to the following conclusions:

1. The sensation of pain consequent to the electric irritation is much reduced in the affected joints, sometimes even entirely gone, so that no pain is perceived when the coils are closely approximated, and by closure of the current numerous sparks are produced. At the same time pressure causes intense pain. The reduction of electro-cutaneous sensibility appears mostly proportional to the intensity of the disease and the pain produced by contact.

2. The diminution of electro-cutaneous sensibility is strictly limited; whenever a joint is affected only in part, the corresponding surface only loses its sensibility to the current.

3. This limit is not gradual, but abrupt.

4. This diminution of electro-cutaneous sensibility sometimes precedes the pain by two or three days, occasionally remaining after the latter has passed away.

5. If the electro-cutaneous sensibility has not yet become normal, the disease, though apparently cured, threatens to return.

6. Synchronously with this alteration, the sense of pressure is reduced, so that a weight of twenty to thirty grammes (five to seven and a half drachms) may not be perceived.

7. The sense of temperature is rendered more acute; the patient can recognize easily a difference of but 0.2° to 0.5° C. (0.36° to 0.90° F.)

8. The tactile sense of the skin covering the joints is heightened. In one case the patient could perceive over the diseased vertebral joints a distance of 0.2 to 0.3 centimetres between the points of Weber's pair of compasses. Sometimes a perversion is noted, one point producing the impression of two.

9. The heightened tactile and thermic sense is reduced by five to ten minutes' faradization.

10. The cutaneous temperature is always higher by 2–3° C. than over the corresponding joints of the normal side.

11. This increase of temperature often precedes and sometimes outlasts the rheumatic pains.

12. After five to ten minutes' faradization, the temperature becomes normal or even lower.

13. The rheumatic pains, increased by pressure and motion are diminished by faradization, so that a most sensitive joint may then permit of active or passive exercise.

14. The abatement of both the rheumatic pains and the temperature persists for three, four, or even five hours after faradization, thereupon gradually returning to the former point. But the duration of the paroxysms, as well as their intensity, is reduced.

15. Although the rheumatic process may run a shorter course, or annoy the patient less under the influence of faradization, still relapses occurred in one case, but the attacks became shorter in duration and less intense.

From all this it can be concluded that faradization for five to ten minutes daily will reduce the intensity of articular rheumatism, bring back the sensibility to the normal point, and lower the temperature of the affected joints. Some of the patients received no other treatment, and still recovered rapidly.

ARSENIC IN HEART DISEASE.

Le Mouvement Medicale, of March 13th, 1875, contains an article by Dr. L. Bonyer, according to which the therapeutic application of arsenic would be vastly increased, as he claims to cure, by means of the same, organic lesions of the heart, which so far we have only been able to palliate symptomatically with digitalis, almost our only medicament in this affection. The latter, generally efficacious in the primary functional disturbances of the circulation, is, according to universal experience, inert, if not harmful, in the latter stage, as it favors the stasis of blood, and hence the serous exudations. In fact, the action of digitalis is purely functional.

Arsenic, however, as Dr. Bonyer claims, does not only regulate the cardiac action, but also influences the anatomical changes; its effects on muscular and fibrous tissues are sufficiently demonstrated in rheumatism and gout. He administers the remedy in the form of "arsenical milk," a composition obtained by the action of arsenic (arsenious?) acid on the salts contained in whey. His usual dose is half a teaspoonful of the powdered arsenical milk, corresponding to about one centigramme (1–7 gr.) of arseniates. This he gives morning and evening, with eight to ten drops of tr. digitalis. From a number of cases, showing the palliative, if not curative effects of the agent, we select the following:

In the case of a man, æt. 50 years, affected with lesion of the aortic valves, the murmurs have disappeared after one month's treatment. In another remarkable case of a man of 45 years, with obstruction of the aortic valves, the existing cyanosis, dyspnœa, ascites, palpitation, and hematysis, have entirely disappeared after three months' treatment, an augmented impulse being now the only symptom. —*Allg. Wiener Med. Zeit.*, No. 13, 1875.

Editorial Department.

AMERICAN MEDICAL ASSOCIATION.

THE Twenty-Sixth Annual Meeting of this Association, was held in Louisville, Ky., commencing on the morning of May 4th, 1875, and ending at noon on the 7th. There was present a more general representation of the profession in all parts of the country, than for several years before. The whole number was not less than five hundred, embracing in the list many of the oldest and most distinguished members of the profession in this country. Dr. Botsford, of New Brunswick, president of the Canadian Medical Association, was also present, and occupied a seat on the platform.

The arrangements for the general meetings were good; those for the sections better than in some former years, but not as perfect as they should be. On the whole, however, the necessary arrangements for the working of the Association were good, and the meeting throughout was characterized by good order, cordiality of feeling, and faithful devotion to business.

The number and character of the papers read and discussed in the several sections, were better than the average of former years, while the addresses of Drs. Austin Flint, S. M. Moore, Wm. H. Byford, and H. J. Bowditch, as presidents of the several sections, and the volunteer paper of Dr. Gross, all read in the general sessions of the Association, were full of interest and instruction. Outside of the proper business of the Association, the social reception at the Galt House, and the numerous entertainments furnished by the profession and citizens of Louisville, were most ample in number, and elegant in character. The absence of intoxicating beverages from nearly all the receptions and entertainments provided, was noted with pleasure, and most highly approved by all present.

The address of Dr. Wm. K. Bowling, of Nashville, as president of the Association, was excellent in matter, and appropriate in style, and was listened to with great interest.

He recalled the original objects for which the Association was organized, noted the progress thus far made, the obstacles to be overcome, and the most efficient means for their removal.

We especially call the attention of our readers to the following, which constituted the closing part of his address:

"The question returns to us—What can the Association now do, in its early manhood, honestly, toward redeeming implied pledges in its infancy? Much, if it have nerve or backbone; nothing, if these be absent! The plan is simple, as all plans are that succeed. Logic and truth are simple, but without nerve the whole moral world is like an empty

sack, utterly incapable of standing erect. The barrier to success has been removed by the abolition of school representation, as such, and reducing the whole body to "lay" members. It was to secure the success of the plan to be proposed, to elevate the standard of medical education, that the resolution was introduced at Nashville in 1857, to remove the schools from the Association.

"In the arbitrary numbering of the objects for the promotion of which this body was created, that of number eight is declared to be 'To take cognizance of the common interest of the medical profession in every part of the United States.' A very comprehensive power, assumed in the beginning, and never denied in all these years, will not be questioned now, when the moral frown of the Association would be fatal to whoever, or whatever, connected with medicine, should oppose the grand and benevolent objects that lie at its foundation. In taking cognizance of the common interest of the medical profession in every part of the United States, it must go back upon itself, and acknowledge its recreancy to the high objects of the fathers, who wore away their lives in an unswerving devotion to it, not to exercise the sum total of its legal and moral force in securing a higher standard of medical education in this country than existed at the time of its inauguration.

"Therefore, let it be solemnly resolved by this meeting, that it shall be regarded as derogatory to the character of any physician, in any part of the United States, to take under his care, as a student of medicine, any one who cannot exhibit evidence of having taken a degree in a regularly chartered college, or a certificate of qualifications necessary to become a student of medicine, from a board of examiners appointed for that purpose by the American Medical Association. This will do the work.

"Territories and new States, in a country like ours, in a formative state, will provide themselves with medical helps in the mode we have described, which, existing outside of this body, and independent of it, will occasion it no concern whatever; nor would the schools suffer pecuniary loss under this rule. When it was generally known, as it soon would be, young men desiring to enter the profession would earnestly devote themselves to the duties of preparation, nor relax their efforts till possessed of the degree or the certificate.

"Again, many educated young men under this rule, would turn their attention to medicine, whose votaries were to consist of their peers, who, under the existing rule, would not risk its leveling influences. Let the doctorate imply something more than 'two full courses of lectures, the last of which in this institution.' Besides, it would give the college an ample excuse for not receiving every uneducated lazy dolt who desired to make a living under false pretences.

"There is nothing really binding in the rule suggested. The only power in the matter is, the great moral weight of the Association. It enacts nothing, but simply asserts what every member of it knows to be right. After a few years, such a certificate of the examining board, or evidence of a college degree, might be declared necessary in order to enable an applicant for membership in this body to

secure admission; for surely it is the common privilege of all organizations to judge of the qualifications of their own members. Then will the certificate of membership here pass the holder anywhere as a gentleman and scholar.

"It is precisely in this way that the medical department of the army and navy are purified. The adoption of this addition to the code of ethics, would furnish medical gentlemen an excuse for getting rid of applicants for office study, whose preliminary education they know to be defective, and whose relations they would dislike to offend by saying so.

"Neither would this rule exclude any one from being a doctor. In a vigorous republic there will always spring up men who, by genius and long self-training, literally hew their way to greatness in all of the professions, while many more will pass through colleges, winning all their honors, to shrink into insignificance, and pass through the world unknowing and unknown. For the former heaven has made ample provisions, and stamped them as the nobility of nature, whom this body can neither depress nor elevate—nay, nor could an association of angels.

"Under the old plan, as under the new, the schools must furnish the Association with delegates; but under the new the delegate was passed upon and accepted before he was medically born. In this latter case the association begins *de novo*, with the beginning. It is present at both ends of the line. In the former case it proposed to arrange the plumage of another party's chicken, to groom the steed of another. The proposition was arrogant, and excited opposition and clamor. The chicken from the prairie and the steed from the desert, captured by the schools, were theirs, and they naturally threw about them the ægis of protection. Examining boards, after two courses of lectures, were boards born out of time, and their tender mercy to the callow brood was not to be trusted and the preposterous suggestion was scouted. The new plan is a medical sandwich. The schools are a slice of ham between an upper and lower layer of association bread. It must be clear to every thinking mind that the plan, while eminently just and proper, places medical education in the United States where it ought to be, with everything else pertaining to the profession, in the power of the American Medical Association. Medical education, *per se*, will take care of itself, the emulation of the schools being altogether sufficient for the maintenance of its great interest. It is the preliminary education of those who would enter the profession that must be looked to. It must be everywhere known that no medical college, nor any other contrivance short of the fiat of the Almighty, can make a physician out of an uneducated man, that medicine is the cap-sheaf of all knowledge, and the belief that prevails that it can exist in the absence of its legitimate supports is only equaled by that which "materializes" the spirits of the departed before the resurrection.

"God opened the Red Sea to the leader who was skilled in all the learning of the most learned people in existence. The greatest body of water is the lowest, and the foundation of the redemption of the world was confided to the lowly, still, when the glad tidings were to be carried to the

learned nations, a profound logician and a philosopher received the appointment; and all, and therefore the greatest, of theological upheavals that have since convulsed the world trace their origin to brains of the most elaborate culture. The god-like Clay, in his speech to his old neighbors, upon retiring from the Senate of the United States, among the obstructions in the path of his early life, alludes feelingly to his 'imperfect education.' Drake, on whose triumphant theatre we are, and whose mighty spirit hovers about it like the aroma of the broken vase, would not go to Europe in his old age, being ashamed of his want of knowledge; and he, whose great soul conceived and planned this organization, and whose eloquent pleadings have held it to its moorings, amid storm and sunshine, through a generation, in a heroic struggle to secure a higher educational plane for his beloved profession, declared that a defective early training had met and abashed him at every turn in his professional life."

ASSOCIATION OF AMERICAN MEDICAL EDITORS.

THE seventh anniversary meeting of this organization was held in the parlor of the Galt House, Louisville, Ky., on the evening of May 3d, 1875. There were present Dr. W. S. Edgar, of the *St. Louis Medical and Surgical Journal;* Dr. W. K. Bowling, of the *Nashville Journal of Medicine;* Drs. L. P. and D. W. Yandell, and T. Parvin, of the *American Practitioner;* Dr. A. N. Bell, of the *Sanitarian;* Dr. H. C. Wood, of the *Philadelphia Medical Times;* Dr. N. S. Davis, of the MEDICAL EXAMINER; Dr. Culbertson, of Cincinnati, and Dr. Bixbey, of Boston.

The meeting was called to order by the President, Dr. W. S. Edgar, of St. Louis, who read an interesting address, criticizing the present system of medical education, advocating the adoption of measures to insure a better preliminary education on the part of young men before entering upon the study of medicine, and the establishment of boards in each State to examine and license men to practice, independent of the schools or of the college diploma. The subjects embraced in the address were discussed by nearly all the members present. The following officers were elected for the ensuing year:

President, Dr. A. N. Bell, of Brooklyn, N. Y.; Vice-President, Dr. H. C. Wood, of Philadelphia; Secretary, Dr. F. H. Davis, of Chicago.

The Association adjourned to meet on Monday evening preceding the first Tuesday in June, 1876, in Philadelphia.

Gleanings from Our Exchanges.

CORRESPONDENCE.

London Correspondence in American Medical Weekly, April 24, 1875.

PROFESSOR LISTER, of Edinburgh, is now publishing the results of his more recent experiences of antiseptic surgery. In spite, however, of his powerful advocacy in favor of the methodical use of antiseptic liquids in the treatment of compound fractures, etc., it is frequently demonstrated by comparative experiments that his treatment possesses little more superiority over the old and despised cold water dressing. The secret of Lister's success as a surgeon probably lies in the manipulative care and cleanliness which he practices and teaches. Next week he starts on a visit to those German and French hospitals where his method is in vogue.

A curious case of congenital skin pigmentation in a woman is reported in a foreign contemporary. On various parts of the trunk of the patient there are patches, varying in size, of a perfectly milk-white color, while the face is marked in different parts with black spots. There is no history of illness at any time, and the functions of the body are perfectly healthy and natural. The father of the woman alleges that she was born in the condition described. It must be conceded to be a very rare case, the like of which has not, as far as I am aware, been recorded in any book.

The Obstetrical Society of London will shortly commence a discussion on the relation of puerperal fever to the infective diseases and pyæmia, and especially the relation of bacteria to the pyæmic process in puerperal fever. The mortality from this fever has of late been quite excessive in this country, and if the Society will demonstrate the utility of some curative measure in its treatment, they will be doing a great service to the large body of general practitioners.

Some few years ago the administration of digitalis in typhoid fever was strongly advocated and praised, although no more cogent argument in favor of its use than that it lowered the temperature of the body, was put forward. The practice did not gain much favor when it was fairly tried, and it soon fell into desuetude. I now learn that an attempt is made to resuscitate the practice. The drug is given alone and in very large doses.

A few evenings ago a hospital surgeon described at one of the societies the cure of a pulsating tumor of the orbit (left) depending on a fracture of the base of the skull. It is some time since a case of intra-orbital aneurism has been recorded. The patient in question had a loud bruit. In the first instance compression, digital and instrumental, was perseveringly tried, but without effect. A weak solution of the perchloride of iron was then injected into the ophthalmic vein. No good result accruing, the common carotid artery was dissected out and ligatured. The man recovered quickly.

Dr. B. W. Richardson delivered a lecture last week on the causation of fever by septinous poison. He demonstrated that the secretion in the peritoneum of a patient under pyæmia was directly poisonous to the lower animals by inoculation, and that the poisonous matter could be made to combine with acids, so as to form a salt which retained the noxious qualities of the mother liquor. By a series of simple experiments he showed that the septinous poisons in the varied

forms of vaccine, purulent discharge, decomposing blood, and the like, possess one and all the properties of liberating oxygen in the form of peroxide. He showed that in blood which had been rendered arterial, the oxygen is readily liberated in the presence of these disturbing causes, and that with the liberation there is a rise of temperature. In the process of liberating the oxygen, however, the liberating organic agent is itself destroyed, so that a relay of it is necessary in order to keep up the action. The theory advanced by Dr. Richardson as to the origin of fever during the presence of the septinous poisons in the body is that, absorbed in the blood, they set free an excess of oxygen until they are themselves destroyed. Then the fever remits until there is local formation of a new charge of poisonous matter and renewed absorption. The bearing of this theory on contagious fever, in all its forms, was considered with great care, and numerous clinical and therapeutical facts were cited in support of the theory, which is at present claimed to be nothing more. It is well known that Dr. Richardson has been working for years on this subject.

That bromide of potassium produces in some constitutions erythematous and acneform eruptions is tolerably well known. The eruption, as a rule, subsides on the discontinuance of the bromide. One or two cases, however, have lately been observed in which the eruption was very intractable and painful.

Araroba powder, made into an ointment, is getting into repute in the treatment of ringworm and other allied affections. It is also medicinally active, and promises to become popular as a purgative.

The great scheme of having one portal of admission into the ranks of the profession in this country has again been swamped in consequence of the disagreement of rival colleges and corporations. It has been in progress for the last five years, and after absorbing much time and attention in arranging preliminary matters, seems likely to end in smoke. Many persons pray that the government will now take the subject in hand and formulate a scheme of its own, utterly ignoring the nineteen licensing bodies that at present exist. The bitterness and animosities which the whole thing has caused are very great.

DERMATOLOGICAL.

N. Y. Correspondence in American Medical Weekly, May 1, 1875.

TWO suggestive papers in the department of Dermatology, have recently been presented for the consideration of the societies. The first was read before the Medical Library and Journal Association, by Dr. R. W. Taylor, to the style and scholarship of whose monograph on Syphilitic Lesions of the Osseous System in Infants, the reviewer of the *American Medical Weekly* lately took exception. This subject was the "Ætiology of Infantile Eczema;" and in the outset, he said that he did not wish to state any point dogmatically, but simply to give the results of some of his clinical studies. He alluded to the rheumatic and scrofulous diatheses, but excluded the former from the present consideration, on the ground that rheumatism occurs so rarely in the infant; and when it does, has no appreciable influence on the skin. After some remarks on the characteristics of scrofula, he considered the relation between that affection and eczema. Scrofula engrafts a tendency to inflammation on the skin and mucous membrane, but there is nothing specific about it. Eczema

bears the same relation to it as a bronchial or intestinal catarrh for instance. It has, however, an exciting cause also. This is usually only a small furuncle or other insignificant local irritation. The scrofulous form of eczema generally invades extensive surfaces, and is deep-seated, rebellious to treatment, and subject to relapse. Is eczema hereditary—there being no other deviation from normal health in the economy? Hebra answers this question in the negative, and Tilbury Fox in the affirmative. Dr. Taylor agreed with the latter, and showed that icthyosis, xeroderma, nævi, etc., were transmitted in the same way. The explanation of this heredity is, that one portion of the organism alone is stamped with a deviation from the normal condition, and not the whole system. There is, therefore, no proper eczematous diathesis, though a predisposition to cutaneous inflammation is often transmitted from parents to child. He then spoke of the relation between an eczema and other skin diseases in children. The debility following the exanthemata, particularly measles and scarlatina, is especially favorable to eczema, as well as to nasal catarrh, and other evidences of depressed vitality. Any inflammation of the skin predisposes the heart to the same or similar attacks in the future; owing to the impressions made on the blood-vessels, nerves, etc. Vaccination and other local irritations induce a local tendency to inflammation. Sometimes, however, this tendency affects the whole integumentary surface, though the attack is generally most severe at the point of irritation. Finally, the violence and duration of the first local affection have a direct influence on the severity of subsequent attacks. Eczema then, has a local origin in children, but it does not begin spontaneously. It is due primarily to some irritation, and is modified by the scrofulous diathesis, or some of the other conditions alluded to. The frequency of eczema about the head shows this. Among the local exciting causes may be mentioned, the too vigorous use of soap and water, sebaceous accumulations on the head from neglect of cleanliness, pediculi, furuncles, irritating discharges from the eyes, nose or mouth, rough woolen clothing, and the direct action of cold air. Dr. Weisse considered xeroderma, icthyosis and eczema, all manifestations of one tendency, all being found in tissues of very low vitality, and called attention to the influence of dentition in producing eczema. Dr. Taylor explained that he had purposely omitted to speak of such reflex influences as dentition, so as to make his argument as simple as possible.

The second paper to which we have alluded, was on the Relation between the Urine and the Diseases of the Skin, and was read before the Academy of Medicine by Dr. Bulkley, editor of the new *Dermatological Journal*. This subject, he said, was almost totally ignored in the systematic treatise on diseases of the skin, and he had therefore been trying to make some researches in it. Since 1867, he had made 535 analyses of the urine from those suffering from skin affections; but it was only quite recently that he had begun to appreciate the importance of studying the state of the blood, as evidenced by the kidneys, in this class of diseases. He first spoke of the condition of the urine in the exanthemata, particularly erysipelas, scarlatina, measles, and smallpox, and then showed that in urticaria, which seems to have a direct relation to jaundice and rheumatism, there is a deficiency in urates and uric acid. Colchicum restores these, and therefore cures the disease. In erythema, which is also associated with rheumatism, the urine shows the allied condition of lithæmia to be present. Dr. Bulkley has examined the urine of eighty-two persons suffering from eczema, reaching 113 analyses in all, and in not one instance did he find it normal. Two classes of changes were noted: (1) Those denoting acid digestion, the oxalate of lime, etc., being found. (2) Those typical of chronic lithæmia,

there being an accumulation of uric or lithic acid, or both.

The specific gravity was usually higher than normal, and the urine was always acid when passed. Albumen was but rarely found. He made twenty-four analyses of the urine of eight persons suffering from psoriasis (which is even more intimately associated with gout), and always found hyper-acidity and oxalate of lime. He also gave the results of his analyses in acne, pruritus and xeroderma, but we have not space for them. In conclusion, he hoped that he had said enough to show that the consideration of the condition of the urine was an important element in the study of dermatology. He thought the German school had done harm by teaching us to disregard the internal condition. Systemic disturbances are almost always present, and it is our duty to correct these, if possible; the examination of the urine affording many valuable hints for therapeutics. The nerve origin of many skin diseases, is entirely compatible with this view of the urinary derangements found in them, and can be readily explained through the medium of the circulation.

DISCUSSION OF TUMORS BY ELECTRICITY.

From the Clinic, May 1, 1875.

IN the discussion of tumors, this agent may be employed in two or three ways, but always with the continuous current. It is most effective when the mass is benign, as in pelvic cellulitis, cystic or orchitic enlargements of the testicles or in goitre—these affections having all been successfully treated by electricity. Where the tumor is of a malignant nature, long continued treatment is frequently as efficacious as any form of surgical interference, and may be thoroughly relied upon to arrest development. In these cases, however, there is scarcely anything known, and time may or may not demonstrate the value of electricity over the methods of treatment now in vogue.

Within the past three months, several fibroids have been submitted to treatment by galvanism, with highly encouraging results. I have long been doubtful of the necessity of introducing needles into such tumors, and attempting dissolution of the mass by powerful galvanic currents employed in this way, since the great density of the tissues precludes more than a small portion thereof being affected at once, and since, in my hands at least, abscesses have formed between the needles as the sole effect of such treatment. Two fibroids have been treated ineffectually by galvano-puncture, which afterward yielded to and were removed by the process I am about to refer to, which may be called external electrolysis. One other, which was transferred to my charge seven weeks since by Dr. Clarence T. Gardner, an old anæmic uterine interstitial, almost as hard as bone, has, in that time, been reduced more than one-third by actual measurement, and the patient otherwise improved in health. The mode of application in this case will serve to illustrate the process usually adopted. An uterine electrode, carefully insulated up to within one and a half inches of a bulbous point, is introduced into the uterus as far as possible, and connected with the negative pole of an intensity galvanic battery. The positive pole is attached to a sponge-covered disk, which is placed under the sacrum, and a current

strong enough to produce a distinct pricking sensation, passed between them for at least thirty minutes, daily. When the negative pole is withdrawn from the cavity of the uterus, it is always thickly coated with oxide, which is harmless, the metal employed being iron. The result is slow chemical decomposition of the fibroid and energetic stimulation of the absorbents, whereby the mass is gradually renewed. It is true that the process is long and slow; but, in the great majority of cases, patients prefer this to the more rapid action of the needles, even were such action effectual, which I doubt. In the case referred to, no other operative interference is possible, save the hypodermic use of ergotin; and even the most enthusiastic supporters of that plan of treatment, confess its barrenness of result, when the tumor is not partially, at least, myomatous. In fact, the employment of galvano-puncture in solid masses like old fibroids, or indeed, in enlargements of any kind, where the texture of tissue is extremely dense, is to be avoided as worse than useless, and as capable of doing great harm. If any good can be attained at all by the action of galvanism in these tumors, it will be best attained, I believe, by the plan just described, which is absolutely harmless, painless, and usually beneficial to general health.

It is only where the substance of the mass is partly or wholly fluid, that galvano-puncture is permissible, and where its effects are so brilliant in curative result as published records show. In hard tumors, where time is an object, I am of opinion that the knife operation is better than any plan yet proposed; but to many, especially to delicate women of strong nervous temperament, the idea of cutting is so repugnant, that they are willing to submit to external electrolysis for any length of time, provided a favorable result may finally be reached; and this has been done in at least three cases.—*The Present Status of Electricity:* Wm. F. Hutchinson, M.D.

CHANGES IN THE NEW YORK SCHOOLS.

New York Correspondence of Boston Medical and Surgical Journal, April 29th, 1875.

BY a resolution recently passed by the Commissioners of Charities and Correction, the medical board of Bellevue Hospital has again been changed, and the resolution passed last July rescinded. In order to understand clearly the position of affairs, an account of the old service, and the connection of Bellevue College with the hospital, will be necessary. When Bellevue Hospital Medical College was organized, in 1861, most of the gentlemen of the attending staff, who were not connected with any school, became members of its faculty. This gave the new school a very large representation in the medical board, which it has never lost. In June last, of the eighteen members of the attending staff, Bellevue had ten, the University two, the College of Physicians and Surgeons three, and the outside profession three. In July last, through the influence of three or four medical gentlemen, who were hostile to Bellevue, and were acting in the interest of the University and the Twenty-third Street Medical School, the Commissioners passed a resolution reorganizing the medical board of the hospital, and dividing the service into four equal sections, giving one to each of the colleges and one to the outside profession, making the board to consist of sixteen members. It was also ordered that any vacancy occurring in any division should be filled by and from the class in which the va-

cancy occurred. This retired six Bellevue men, the loss of whom crippled that school very much, as its course of instruction has always been more clinical, and less didactic, than that of either of the other schools. It was evident that the aggrieved party only wanted the power and the fight would be renewed. This came sooner than any one expected. In January last the old board of commissioners was removed, and a new one appointed by the political party in power. The result has been that the new board, through strictly political influence, has been won over to the Bellevue College interest. To bring about this, the Governor of the State is said to have come down from Albany, with the result of putting back all the old staff, by increasing the medical board to twenty-four members in accordance with a resolution passed March 11th. Immediately on this change being ordered, one of the attending staff, not connected with any college, resigned his position, stating to the commissioners that as they had broken faith with the profession he declined to hold any position in either of their hospitals. It is rumored that changes are to be made in the medical board of Charity Hospital, in the interest of the same school. Already certain political magnates have stated that certain of their friends must go on the board.

There is an unfortunate rivalry among the medical colleges here, which is getting more and more bitter, the end of which no one can foresee; but it is certain that no real good can result from political wire-pulling, either to the colleges themselves, or to those who have been active in using political influence to bring about very questionable changes.

By the death of Dr. Delafield, the College of Physicians and Surgeons lose their president. The election of Dr. Alonzo Clark to that position would no doubt be very acceptable to the profession, but there is no one to fill his place as professor of theory and practice. The late Dr. Anstie, of London, was offered the place, but he felt compelled to decline on account of family ties. I have heard the names of Dr. Willard Parker and Dr. Buck mentioned in connection with the presidency, but it is only a rumor, and I give it for what it is worth.

The resignation by Dr. F. H. Hamilton of the position of Professor of Surgery in Bellevue College was a surprise to the profession at large. He will be a great loss, as he was considered one of their ablest instructors. The cause of his withdrawal is the same that compelled Dr. Hammond, a year ago, to sever his connection with that college — misunderstanding with the ruling power in the faculty. It is understood that Dr. W. H. Van Buren will fill his place next winter. It is rumored that changes may take place in the other medical schools.

INTESTINAL GASES. — Dr. Leven read before a recent meeting of the Society of Biology a communication regarding the gases contained during digestion in the stomach and small intestine. Physiologists have asserted that these gases consist partly of air that has been swallowed with the food, and partly of gases from the blood which have been evolved in the stomach, or in connection with the various chemical processes that accompany the digestive catalysis. Dr. Leven does not, however, share in this opinion, since, as he claims, it precludes the proper investigation of the nature and quantity of intestinal gases.

These gases are always constituted of oxygen, nitrogen and carbonic acid. The nitrogen is constant in its presence, and forms, so to speak, the base. Its most frequent appearance is in the form of a mixture with oxygen, or carbonic acid, yet very often it

is found alone, whereas this is never the case with either of the other gases.

Their quantity is almost always invariable whatever may be the food to which the animal may be restricted, whether it is given the most indigestible or the most simple and readily assimilated.

When a dog is given a quantity of fat and cabbage, his stomach and small intestine become reddened, swollen, and eccymotic, but the quantity of gas in the alimentary track is never very considerable in its amount.

Moreover, Dr. Leven denies that there is any relation between the manner of alimentation and the production of gases; the distension and meteorism are caused, he thinks, by a paralysis of the muscular fibres.

To these opinions several members offered objections, but the discussion was deferred until the completion of further experimentation.

Still more recently, it has been announced by M. Bert in the course of these experiments, MM. Planer and Chevreal have discovered the presence of other gases than those named by Dr. Leven, among others, carburets of hydrogen.

At the following meeting, however, Dr. Leven continued his communications upon this subject, by stating that he did not stand alone in having failed to meet with hydrogen and the proto-carburet of hydrogen in the course of his investigations. Other observers than himself had never found them. He also called attention to the fact that if these intestinal gases arise from fermentation of food in the small intestine, these gases should be most abundant during digestion; but the contrary is the case, and it is especially when the animal is fasting that their existence is manifest.—*Progres Medical*, Nos. 7, 8 and 9, 1875. F. J. H.

THORACENTESIS IN PNEUMO-THORAX.—The third lecture in the series of clinical lectures, edited by Dr. Seguin, is by Professor Flint, and is entitled "Pneumo-thorax." As there can be no higher authority in all that relates to lung-trouble than the distinguished professor at Bellevue, we quote his remarks on Thoracentesis: "If the pleural cavity become filled after pneumo-thorax has been known to exist, I would not resort to aspiration so long as the quantity of liquid was not large enough to occasion suffering from dyspnœa; that is, assuming that the liquid is not pus, and this is readily ascertained by exploring with the hypodermic syringe; but if there be sufficient dilatation of the chest to occasion dyspnœa, I would withdraw a certain quantity of the liquid, enough to relieve dyspnœa, leaving sufficient to secure the possible advantage of compression; and the withdrawal of liquid within this limit may be repeated *pro re nata*."

Professor Flint gives it as his opinion that the liquid should be withdrawn from the chest always by means of either a canula or catheter. "Puncturing the chest to give exit either to air or air and liquid whenever the suffering from dyspnœa, due to dilatation, is great, is undoubtedly judicious as a merely palliative measure. This I have done repeatedly. But the inquiry has arisen in my mind whether it may not be possible in some rare cases to accomplish something beyond a temporary relief by making a free opening into the chest, as in cases of pneumo-thorax incident to empyema. Let us suppose a case of pneumo-thorax from the bursting of a tuberculous cavity, the amount of phthisis small, the disease non-progressive, and all the circumstances favorable for arrest and recovery, aside from the perforation of lung. There are such cases, albeit they are infrequent. May we not hope that by a free incision, the cure of pneumo-thorax is possible in these cases? The answer to this question must be based on clinical facts which are yet to be acquired. Meanwhile, I can see no objection to making trial of this measure. Pneumo-thorax occurring as a complication of phthisis, is almost hopeless. In the majority of cases, this complication de-

stroys life within a short period. We may say that the prognosis involves only a question of tolerance. It is probable that a free opening into the chest will not shorten the duration of life, and it certainly affords great relief. It is therefore warrantable."—*Am. Practitioner.*

THE NATURE OF CHRONIC ALOPECIA.—Dr. J. Pincus (*Berliner Klin. Wochen.*, February 1) says that nineteen out of every twenty cases of baldness are due to the disease known as alopecia furfuracea, or calvities senilis and prematura.

Two views of the pathology of this disease have been held: one ascribing the accompanying atrophy of the cutis to a primary wasting away of the vessels; the other, to an atrophy of the peripheric nerve-fibres. Dr. Pincus believes that a condensation of the connective tissue of the lower layers of the cutis takes place in the earlier stage of the disease, accompanied by a loss of typical length on the part of the hairs, but not in their diameter. At the same time certain alterations take place in the amount and character of the glandular secretion, possibly depending upon the irritation of the condensing connective tissue surrounding them.

In the second stage, the hairs become thin, and this is particularly noticeable in the thickest and woolly hairs, whose roots are situated deeply among the condensing tissue. In the first stage of the affection, the whole head is equally affected, and the hair becomes equally thinned throughout. In the second stage, it is the vertex and forehead which are most severely affected, and while the sides remain stationary, the disease-process goes on in these localities. By the slow and gradual destruction of the nerve-fibres by the condensing connective tissue, the relative sensibility of the skin is much diminished in the affected parts, but without pain.

In the earlier stages of the disease, Dr. Pincus recommends the use of a solution of caustic potassa or soda, one part to two hundred and fifty or five hundred of water, or sodii carbonas, four parts to one hundred to two hundred, or sodii bicarb., four parts to fifty to one hundred and fifty. Of these solutions, two or three tablespoonfuls are to be rubbed into the head for several minutes; at first daily, afterwards oftener. Unfortunately, the prolonged use of this remedy, although of great service, yet has the drawback that it discolors the hair. If it is wished to avoid this, a solution of iodide of potassium, one or two parts to one hundred, will act favorably, though not so rapidly as the former.

In the latter stages, Dr. Pincus uses stronger solutions of these alkalies, with a very weak solution of corrosive sublimate, one part to seven thousand five hundred. He has used all the various irritating and astringent washes, oils, and pomades, without success.—*Phil. Times*, April 24, 1875.

INTERNATIONAL MEDICAL CONGRESS. — Arrangements have been made to hold an International Medical Congress early in September, 1876, in Philadelphia, at which discourses will be read upon Medicine and Medical Progress in the United States; on Surgery; Obstetrics; Chemistry and Pharmacy; Materia Medica; Medical Jurisprudence and Toxicology; Hygiene and Social Science; Medical Biography; Medical Education and Institutions; and Medical Literature. The morning sessions will be devoted to general business and reading these discourses, while the afternoon sessions will be devoted to sections on Medicine, on Surgery and Anatomy, on Obstetrics, on Chemistry, Materia Medica, Hygiene, and Medical Jurisprudence, and on Ophthalmology and Otology. This congress will consist of delegates, native and foreign, representing the American Medical Association, the various State medical societies, and the medical societies of Europe, Mexico, the British Dominions, Central and South America, the Sandwich Is-

lands, the East and West Indies, China, and Japan. The congress is to be organized by the election of a president, thirteen vice-presidents, seven of whom shall be natives and six foreigners, a recording secretary, two corresponding secretaries, a treasurer, an executive committee, and a committee on publication. It has been agreed that no vote shall be taken during the sittings of the congress upon any topic discussed or address delivered. The preparation of these discourses has been entrusted to able hands, and it is intended to publish them in an appropriate volume commemorative of the occasion. For the purpose of carrying out these arrangements, a Centennial Medical Commission of Philadelphia has now been fully organized. The president of this commission is Dr. S. D. Gross, and the vice-presidents Drs. Ruschenberger and Stille.—*Boston Med. and Surg. Journal.*

A New Way of Operating on the Larynx.—The *Medical Times and Gazette* gives an account of a new method of operating on the larynx, which has been devised by Dr. A. Eysell, of Halle. Every laryngoscopist, he says, must be aware how difficult it is to reach a tumor growing in the lower part of the larynx, which is not movable enough to be driven above the level of the vocal cords by forced expiration. He has, however, succeeded in removing them by the following method: Whilst observing the larynx by means of the laryngoscope, an exceedingly elastic needle is passed through the skin and crico-thyroid membrane, into the larynx, exactly in the median line, and immediately beneath the thyroid cartilage. The needle is then made to transfix the tumor, and by depressing its handle the latter is forced up into the ventricle of the larynx. No hæmorrhage takes place, the only pain felt is during the transfixion of the skin, and no local mischief has followed even frequently repeated operations. If it be intended to cauterize or tear away the tumor, the patient is directed to hold the mirror, or better still, the needle; and in this way Dr. Eysell has succeeded in removing fibromas from the lower part of the laryngeal cavity. He afterwards attempted to operate on tumors, with the needle itself, which could not conveniently be attacked through the mouth, and for this purpose he employed the needle used by Schwartz for performing paracentesis of the tympanum; but even this ought to be gently heated before use, in order to make it more pliable. It was passed, as before, into the larynx, and several incisions or pricks made into the tumor, which was then lifted up and cauterized. In a case where the vocal cords were adherent to one another for their anterior two-thirds, as the result of a suicidal cut throat, which caused considerable shortness of breath on slight exertion, a narrow tenotome was passed through the scar, 0.5 centimetre broad, into the larynx. When the point appeared behind the triangular adhesion, the handle was firmly depressed, and by drawing the knife downward the cords were separated almost to their origins. In the same way, no doubt, injections might be practiced on laryngeal tumors, by the employment of a needle-pointed syringe. It may be impossible to perforate the thyroid cartilage in old people on account of calcification.—*The Doctor.*

Heat and Hydrophobia. — The mysterious influence of the "dog-days" upon the canine race, is an opinion of the greatest antiquity, dating back, apparently, to Annubis, the dog form of the Egyptian Apollo, whose appearance in the heavens was a premonition of impending danger. It probably also had some connection with a festival of the Argives, marked by the destruction of many dogs. In the "Iliad," Homer mentions Orion's dog as affecting human health disastrously. Pausanius, in his "Travels in Greece," alluding to the story of Actæon's destruction by his own

hounds, was inclined to attribute the myth to the circumstance, that the season had caused the pack of the famous hunter to run mad. Pliny remarks, in his "Historia Naturalis," that canine madness is fatal to man during the heat of Sirius, and proves so in consequence of those who are bitten having a deadly horror of water. For such reason, during the thirty days that this star exerts its influence, we try to prevent the disease by mixing dung from the poultry yard with the dog's food, or else, if he is already attacked with the disease, by giving him hellebore." From the time of Pliny until quite recently, the development of rabies by summer heat has been accepted as a fact among scientific men, and the idea has become too deeply rooted in the popular mind to be easily eradicated. Only within the present century has it been proved conclusively by critical inquiry, that no season of the year is specially concerned in the production of this formidable affection. Hence the absurdity of legislative enactments designed as precautionary measures against hydrophobia, and operative only during the summer months. — DR. C. P. RUSSELL, *in Popular Science Monthly for December.*

FORCIPRESSURE.—At a recent meeting of the Societe de Chirurgie of Paris, M. Verneuil called attention to the value of the use of forceps in compressing bleeding vessels, and he gave the name of *forcipressure* to the method, which, however, he did not claim as new. He stated that he was in the habit of applying the forceps in this way when the hæmorrhage was severe, and from a large extent of surface. The instruments might often be left in place for several days.

M. Pean has also made some contributions to the same subject. In a recent communication to the Academy he states that the application of forceps for the arrest of hæmorrhage was indicated in the following three cases:

1. To prevent hæmorrhage, by compressing the vessels before the incisions were made. This procedure was especially useful when peritoneal adhesions were to be cut through.

2. To arrest hæmorrhage temporarily, as in the course of an operation, using the ligature subsequently if the vessels bled.

3. To arrest hæmorrhage definitively; he then applied them, and left them in place with the dressings. They were removed on the first, second, third, or fourth day.

The forceps he used were very much like the ordinary dressing forceps, and the jaws were either T-shaped, diamond-shaped, or triangular. An ordinary rack and pinion attachment was fitted to the handles, and in this way firm compression could be maintained indefinitely. M. Pean had used these forceps in the operation of castration, when he found it desirable to compress the cord. He applied two of them to the cord, removing them on the fourth day.— *Journ. de Med. et de Chir.*, March, 1875.

ON NERVES CONTROLLING THE DILATATION OF VESSELS.—Prof. Goltz and others have been making experiments on dogs to determine the effect on the temperature that followed the section of nerves. They found that after dividing the sciatic, the vessels in the affected limb underwent active dilatation, and this result occurred repeatedly in the same limb, if only section were again made of the nerve at a point nearer the periphery. As a result of these experiments, Goltz maintains that on section of a nerve the vaso-dilator fibres contained in it are irritated, and in consequence produce an active dilatation, which, however exhausts itself subsequently, and is followed by a persistent contraction. It is believed further that the tone of the vessels is maintained by certain nerve-centres which exist in the vascular walls. These views are believed to derive support from the fact that they explain certain observed phe-

nomena, as *e.g.*, that the penis of the horse becomes erect after section of the pudic nerve, the vessels of the belly dilate after division of the splanchnic, hyperæmia of the eye follows section of the trigeminus, etc. The author also claims that the condition of irritation, which is constantly observed in the sensitive nerves after section, supports his hypothesis *e.g.*, the pain in the fingers after division of the median nerve.—*Med. Centralbl.*, xii., 41., 1874.—*Schmidt's Jahrb.*

OLEATE OF MERCURY (FOR EXTERNAL APPLICATIONS).—Much difficulty has been experienced in the preparation of this really valuable mercurial compound. The mistake generally made arises from the erroneous idea that heat is required to effect the union of the constituents. The fact is that the effect of even a gentle heat is detrimental to the preparation, generally causing a reduction of the metal, with the formation of an unsightly grayish-black deposit. Most authorities recommend the use of the yellow oxide of mercury, representing that it is more readily dissolved by the oleic acid than the red oxide. Undoubtedly this is in some sense true, but unless the yellow oxide is sifted into the oleic acid, and well mixed with it by careful stirring, it is apt to aggregate in solid lumps, which resist the action of the solvent a long time. On the other hand, the red oxide, if reduced to a fine powder, dissolves with sufficient rapidity, and requires no special precaution to prevent the formation of lumps.

The following formula in our hands has always yielded a satisfactory product:

℞—

Red Oxide of mercury in fine powder, ʒ vi;
Oleic Acid, purified, Oi.

Mix the oxide with the acid in the cold, and stir occasionally until a transparent solution is obtained. Keep the product in well-stopped bottles, protected from the light.—*Detroit Rev. of Med. and Pharm.*

TERMINATIONS OF NERVES IN GLANDS.—M. Rouget, at a meeting of the Societe de Biologie, speaking of the different opinions regarding the terminations of nerves in glands, described the venomous glands in the dorsal glands of the larvæ of the salamander as very convenient for the study of that subject. These glands are quite independent of the vessels and form globular groups, into each of which penetrates a nerve that divides into two secondary tubes which arrive at the centre of the glandular cellules, retaining their medullary substance. Thus there is contact between the cellule and the nerve. The presence of a further subdivision cannot be determined; moreover, it is unnecessary to suppose this ulterior subdivision.

M. Rouget has also demonstrated the important fact that in the cockroach there are certain nerves which distribute themselves into cellules and are in contact with the protoplasm of the glandular elements.—*Gaz. Hebdom.* F. J. H.

ERGOT IN CYSTIC PARALYSIS.—Dr. J. Willimsky (*Centralblatt fur Chirurgie*) made some experiments with ergot upon the bladders of dogs and rabbits, in which he observed that immediate contraction of that organ ensued, and continued for several seconds. He afterward employed it in the form of injections of the fluid extract in two cases of paralysis with the following results: The first was a marked paralysis occurring in a maiden lady of forty-six; division of a cicatrix between the posterior wall of the bladder and the neck of the uterus proved ineffectual. A small quantity of the fluid extract was then injected daily into the previously cleansed bladder, and a complete cure was effected in fourteen days. The second was a case of acute cystic catarrh with inability to completely empty the bladder. Three injections at intervals of twenty-four hours afforded entire relief.—*The Clinic*, May, 1875.

M. PERRINE stated, at a recent meeting of the Surgical Society of Paris, that the method of administering ether by means of a cone covering the mouth and nose, was invented by M. Bonnet, of Lyons! Does he know who first gave it on a towel, and who first on a napkin?

And where is the "Dr. Colton of the United States" who is reported to the same august body as having administered nitrous oxide in 67,000 cases? F. J. H.

AN ANTIDOTE TO CHLOROFORM—Dr. Schueller has discovered that the nitrite of amyl quickly removes the effects of chloroform on the vessels of the pia mater, and that even in cases of advanced narcotism from the latter drug it rapidly relieves the dyspnœa and labored respiration, restoring the strength of the pulse and the reflex excitability. This discovery may prove of much practical value where chloroform continues to be the favorite anæsthetic.—*Rich. and Lou. Journal.*

TREATMENT OF PEMPHIGUS.—Dr. Hillariet, founding his plan of treatment upon the analogy which exists between pemphigus and the second degree of burns, employs in cases of this affection, which is generally so rebellious to treatment, the remedies found useful in burns, viz., the covering of the parts with wadding soaked in oleo-calcareous liniment. The pruritus soon abates, and the bullous eruption ceases at the end of a variable period.—*Union Medicale—Med. Times and Gazette*, April 3, 1875.

THE treatment of jaundice by electricity, has often proved successful. The procedure is certainly worthy of trial. The position of the gall-bladder is first found out by percussion, and to this point the electrode of an inductive electric machine is applied. The other electrode is placed on the opposite side of the abdominal wall. When the current is passed, a gurgling sound may be heard, and the cure is often immediate.—*Am. Med. Weekly.*

Book Reviews.

COMPENDIUM DER NEUEREN MEDICINISCHEN WISSENSCHAFTEN. Von Bernhard Kraus. (*A compend of the more recent medical sciences, etc.*)

This is the title of a neat volume of about 800 pages, just sent us across the ocean by the author, the well known editor of the *Allg. Wiener Med. Zeitung.*

Without claiming to announce any new facts, the author states his purpose to be to present the recent advances in medicine in a condensed and practical shape to the reader who lacks time or means to study the special treatises on these subjects. With this apology on his part, he has nevertheless treated the different departments into which the work is divided with such completeness that they command an authoritative consideration.

Briefly glancing over the work, we must especially recommend the first department, Clinical Thermometry, for the precision and thoroughness which it possesses. In the next chap-

ter, Clinical Sphygmometry, we notice, however, that the researches and instrument of Marey, the practical founder of the science, are almost entirely ignored—certainly not from want of acquaintance with the literature of the French, as the bibliographical index at the end of each chapter shows the thorough command of the same. On the other hand, English, and perhaps also American, authorities receive less consideration than they deserve. To the other chapter—consisting of Auscultation and Percussion, Ophthalmoscopy, Microscopy, Urinalysis, Laryngoscopy, Anomalies of Speech, Otology, Electrology, Hygiene, and Toxicology—similar remarks are applicable. While the use of observations with the ophthalmoscope are very carefully treated, we find very little reference to its application in nervous diseases. The chapter on microscopy is written in such a concise and practical manner as to deserve special mention. The uses of electricity, etc., are also described in a similar manner. The department of anomalies of speech would undoubtedly be of particular interest to the American reader on account of its neglect in this country. In some parts of the work a little more conciseness might be desirable, as explanatory remarks occasionally seem to exceed their limits of space. This fault is less noticeable in parts written by the co-operators of the author.

But these defects are of such minor consideration that we state it as our opinion unhesitatingly that, notwithstanding our numerous *vade mecums* etc., a translation of this work would prove a highly valuable addition to American literature. H. G.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. II.

After a little more delay than was anticipated, the second volume of this important work has made its appearance. In faithfulness of translation, and in typographical appearance, it fully sustains the character of the first volume, and is worthy of commendation. Like the first volume, it is devoted to the consideration of "Acute Infectious Diseases." Varicella, measles, rubeola, and scarlet fever are treated by Prof. Louis Thomas, of Leipzig; small-pox by Dr. Curschmann, of Berlin; erysipelas, miliary fever, dengue, influenza, and hay fever, by Dr. Zuelzer, of Berlin; malarial diseases by Prof. Hertz, of Amsterdam; epidemic cerebro-spinal meningitis by Prof. von Ziemssen, of Munich.

The reader will see that these subjects are among the most important that engage the attention of the practitioner, and they have received a very full and interesting consideration by the several authors. In the departments of history, ætiology, pathology and diagnosis, the work is particularly full and valuable.

In treatment we find nothing new; and yet the general summary in regard to the management of each disease is remarkably judicious, and free alike from the therapeutic skepticism that leads to doing nothing, and the theoretical zeal that demands over-medication.

If we felt disposed to criticize any part of this volume, it would be that relating to the treatment of epidemic cerebro-spinal meningitis.

We think Prof. von Ziemssen has not quite done full justice to this part of the subject. But our object is

merely to call the attention of our readers to the progress in the publication of this most valuable work.

Every practitioner who can afford the money will find this Cyclopædia of the Practice of Medicine one of the most valuable additions he can make to his library. The American edition is published by William Wood and Company, 27 Great Jones street, New York. N. S. D.

THE HISTORY OF THE PHILADELPHIA SCHOOL OF ANATOMY, AND ITS RELATIONS TO MEDICAL TEACHING. A Lecture, delivered March 1st, 1875, at its dissolution, by Wm. B. Keen, M.D., lecturer on Anatomy, etc, Philadelphia: J. B. Lippincott & Co., 1875.

This is a very well written and interesting lecture, well calculated to illustrate the importance of a thorough study of anatomy. It is in the form of a neatly printed pamphlet of thirty-two pages.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. By Geo. M. Beard, M.D., etc., and A. D. Rockwell, M.D. New York: Wm. Wood & Co. Chicago: for sale by Jansen, McClurg & Co. Price, $6.25.

The authors of this work have expended a large amount of time and labor upon this second edition. It has been thoroughly revised and in great part re-written, as well as considerably enlarged. We cannot better indicate the character and extent of the revisions made than by quoting from the author's preface:

"A few weeks after the publication of the first edition of this work, in 1871, we were informed by the publishers that a new edition would be called for. From that time to the present moment much force has been expended on the thorough revision of the work in all its departments. As much time and toil, it is safe to say, have been given to this edition as to the first; and the work, as it now stands, represents our accumulated and thoroughly sifted experience from our entrance upon this specialty, as well as a full and exhaustive resume of all that has been accomplished by other authorities everywhere.

"The use of general faradization as a constitutional tonic in a wide variety of affections is now well established, and the effects that we have claimed for it have been confirmed in full detail by competent observers at home and abroad. This method of using electricity has also attained a wide popularity, and its introduction into therapeutics may be said to have marked a radical and important advance.

"The section on Electro-physics is much enlarged. Observation has convinced us that the one great defect in those who practice electro-therapeutics is ignorance of the physical relations of electricity. From this source flow at least half the blunders, discouragements, and ill-success that novices in this branch so painfully experience. The undulatory theory of the electrical force that is adopted in this edition is, so far as can now be seen, consistent and harmonious, and it explains better than any other theory the varied and complex phenomena of electro-physiology and electro-therapeutics.

"Electro-physiology is largely rewritten and considerably enlarged. It includes a large number of our own experiments, mostly made during the ast three years, as well as a compact resume of all the more recent studies in this branch by European

and American observers. The general relation of electro-physiology to electro-therapeutics has been brought into prominence at every point.

"The method of *central galvanization* that we have systematized and introduced to the profession, since the publication of the first edition, is here described and illustrated in full detail. The great practical advantages of this method of galvanization over localized galvanization of the nerve-centres—and in many cases over general faradization — are already well understood by many of our leading electro-therapeutists.

"There are now introduced into science six methods of using electricity for the treatment of disease: localized faradization and localized galvanization, general faradization, central galvanization, and, in electro-surgery, electrolysis, and galvano-cautery.

"In the chapter on Apparatus we have endeavored to represent with fairness and impartiality the best workmanship and the most recent improvements. The fact of the superiority of continuous over separate-coil Faradic-machines in the treatment of sensitive patients is here for the first time brought out and emphasized.

"A new chapter on General Suggestions has been added, in which the attempt has been made to answer in detail the various practical queries that so annoy the beginner in electro-therapeutics.

"In the section on Electro-surgery the principles of galvano-cautery, of ordinary electrolysis, and of the method of electrolysis of the base have been described and illustrated, and in the clinical portions all varieties of results have been presented from a very large experience in this department, so that one may learn both what can be done and what cannot be done by electricity in surgical diseases.

"In the clinical part of electro-medicine a number of entirely new chapters have been added, and all of the chapters have been re-cast. The number of cases has been increased nearly twofold, the failures and successes being fairly represented.

"We may call especial mention to the chapters on Diseases of the Skin, wherein, besides many other cases, are detailed the remarkable results of central galvanization in chronic eczema and prurigo, and to the chapter on Diseases of Children, in which are recorded the results of experiments in the treatment of whooping-cough, marasmus, and debility, and also the fact of the remarkable tolerance of childhood to electricity. Since the publication of the first edition a number of excellent works on nervous diseases have appeared, and for that reason, as well as for lack of space, the systematic remarks on certain diseases have, in this edition, been mostly omitted, save some special points wherein our views differ from those generally adopted."

THE MAINTENANCE OF HEALTH. A medical work for lay readers. By J. Milner Fothergill, M.D. G. P. Putnam's Sons, New York.

This new work by Dr. Fothergill will no doubt be favorably received by its numerous readers, containing, as it does, much valuable information for the laity as well as the profession. Though much of its contents has been already published, the ideas are so arranged and brought out by the author as to impress the reader with

their value, and it is doubtful whether any one can read the book without gathering much that will be useful to them.

The work is divided into several chapters, in the first of which the author tells how to maintain the health in youth, showing why some children are of a healthy, vigorous constitution while others are always sickly and puny; giving directions as to the food, clothing and exercise necessary to maintain a degree of health at this age. The second chapter is devoted to the changes in maturity, how the different habits affect the system, the occupations chosen for a livelihood, and their influence on the duration of life. And in the third chapter, when maturity has given place to advanced age, and the period of decay comes on, he informs the reader how the action of each of the bodily organs is best facilitated so as to still preserve the health. Besides these three chapters the book contains several others in which such subjects as food, clothes, stimulants and tobacco, and the effects of inheritance, are fully discussed. Not a little attention has been paid by the author to the subject of hygiene, and to the ill effects of mental overwork which is now so common among students and business men. In conclusion, he recommends certain things to be done in case of any of the emergencies of every-day life.

On the whole, it is just such a work as a great mass of the people need to instruct them how to preserve their moral and physical health.

S. W. G.

THE TREATMENT OF NERVOUS DISEASES BY ELECTRICITY. By Dr. Friedrich Fieber. Translated from the German. New York: G. P. Putnam's Sons. For sale by Jansen, McClurg & Co., Chicago. 12mo. 64 pp. Price, 75c.

This little monograph contains a condensed review of the present extent of electrical treatment in nervous diseases, with indications for its employment. Any attempt to cover so wide a field in such extremely brief space must necessarily, however, be unsatisfactory, from its too general and superficial character. The ideas and doctrines advanced are nevertheless good and practical as far as they go.

A HAND-BOOK OF THERAPEUTICS. By Sidney Rivyer, M.D. Fourth edition. New York: Wm. Wood & Co. For sale by Jansen, McClurg & Co., Chicago. Price, $4.25.

This work has been most favorably received by the profession in its former editions, and needs no extended review.

ZIEMSSEN'S CYCLOPÆDIA. — The publishers announce that this work will not be sold in *separate volumes*, but only in complete sets. Those desiring the complete work are therefore cautioned against purchasing any odd volumes that may be offered for sale.

ANATOMICAL PREPARATIONS,

Including Skeletons, and the Separate Bones of the Human Subject, can be obtained at reasonable prices, of

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Dealer in Surgical Instruments,

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THE

MEDICAL EXAMINER.

A

Semi-Monthly Journal of Medical Sciences.

EDITED BY N. S. DAVIS, M.D., AND F. H. DAVIS, M.D.

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Original Communications.

REPORT OF THREE CASES OF ACUTE CEREBRAL SOFTENING.

BY D. A. K. STEELE, M.D., LATE RESIDENT PHYSICIAN, COOK COUNTY HOSPITAL.

THE following notes were taken while an *interne* in the County Hospital:

CASE I.—Michael M., age 41; cooper; native of Ireland; was admitted to the hospital May 19th, 1874. Stated that he was perfectly well until four weeks ago, when he noticed that his right hand and arm began to get weak. At the table, he could not hold his knife in the right hand. Sensation also became impaired. Four or five days ago, began to suffer with pains in the right chest. Symptoms have continued unchanged up to this date. States that for a number of years, he has been a moderate drinker, occasionally going on a spree, and then moderating down to his regular allowance. Will not admit that it has ever done him any harm.

On Admission.—Patient is a large, pretty well nourished man; tissues rather flabby; skin normal; tongue clean, but protruded to the right side slightly; appetite fair; bowels regular; urinates readily. Pulse 78; resp. 18. Complains of weakness in the right arm and hand, and pains in the right chest. Movements of arm apparently not much impaired, although there is a loss of muscular contractility. Was ordered tonics and a generous diet.

May 21st.—Had an apoplectic convulsion this morning, after which he

lay in a semi-comatose condition until the 26th, when he died.

Post-mortem examination sixteen hours after death.

Incision from manubrium to umbilicus.

Lungs.—Healthy, with the exception of slight engorgement.

Heart.—Healthy.

Liver.—Normal in size, but upon the anterior surfce of the right lobe were found three small colloid cysts about the size of a filbert, also a small cretaceous mass about one-half inch in length, and one-fourth of an inch in diameter.

Kidneys.—Slightly congested; other abdominal organs normal.

On opening the cranium, found membranes healthy. On section of the cerebrum, found extensive softening of the whole central portion of the left hemisphere, the brain substance being reduced to a pulpiform mass; other portions of the brain apparently normal.

CASE II.—John N., aged 21; shoemaker; native of Denmark; admitted June 13th, 1874.

Patient states that he always enjoyed good health until four months ago, when he gradually began to have a feeling of coldness and numbness in the left arm and leg. Day by day became weak upon that side; lost his appetite; bowels continued pretty regular.

On Admission.—Find patient fairly nourished; no constitutional disturbance present. Find a partial loss of sensation, and of muscular power on the left side. Find a blowing murmur at the base of the heart, with the first sound. Was ordered potass. iodide grs. vij, and ol. morrhue ℥ ss. three times daily.

On examination of muscular power by the dynamometer, we find the index on left side 35°; on the right side 96°.

July 11th.—Left, 35°; right, 97°.

July 14th.—Left, 30°; right, 100°.

July 17th.—Left, 54°; right, 100°.

July 13th.—Patient complains of constant pain in the head, aggravated by any movement while lying down. For the past week, has experienced some difficulty in swallowing, fluids coming back through the nose. For the same length of time, has noticed that his articulation was becoming impaired. Could not speak certain words readily. Appetite very poor; bowels costive; tongue heavily coated with a whitish brown fur. Complains of dark spots floating before his eyes.

July 14th.—Tongue still furred. On protrusion, it deflects to the left.

July 21st.—Dynamometer on left side 31°; on right, 100°.

July 27th.—Left, 21°; right, 98°.

July 28th.—The test of electro-contractility and electro-sensibility, revealed diminished contractility of all the muscles of the upper extremities except the pectoral muscles. Electro-contractility diminished in the legs, but sensibility good.

August 7th.—Paralysis is becoming more marked. Patient sweats profusely. Bowels obstinately constipated. Pulse 88; temp. 98; resp. 28. Pupils widely dilated. Passes urine and fæces involuntarily. Is wildly delirious, talking in an incoherent semi-idiotic manner; rapidly growing weaker; unable to leave the bed; face assuming a dull leaden expression, constantly covered with a cold perspiration. Paralysis of the pharyngeal muscles prevents intelligent articulation.

August 9th.—Died apparently from a gradual paralysis of the vital organs. Had no convulsions preceding death—passed away quietly.

Sectio - cadaveris. — Twenty - four hours after death, body presents an exsanguinated appearance. Lungs, healthy. Heart, small. Valves, normal; right side distended with venous blood. Liver and spleen, small and congested. Kidneys, normal in size, but intensely congested. In fact, all the viscera presented a hyperæmic appearance.

On removing the calvarium, the dura mater seemed slightly thickened. A small amount of serum at base of brain; superficial vessels of brain distended with blood. On making section of the brain, found in left hemisphere all of the anterior and superior portion of the gray matter healthy. Lower portion of gray matter soft and diffluent. In the anterior lobe of left hemisphere, the white matter is healthy, but the posterior and inferior portions are soft and diffluent. In the right hemisphere, gray matter healthy, superiorly. Inferior portion of gray matter and all the white matter, soft and disorganized. Cerebellum softened, especially on the left side; pons varolii in the same condition. Spinal cord, healthy.

CASE III.—N——, aged 28; laborer; Poland; admitted August 24th, 1874.

Having no interpreter, and the patient being unable to speak much English, it is impossible to get an accurate history of his ailment.

It seems he has been sick about six weeks; was working in a lumber yard previous to this time, when he caught cold; has had several chills; thought he was sun-struck. Appetite has been poor; bowels costive; and he has complained of pains in the lower extremities ever since.

August 25th.—Has retention of urine, requiring the daily use of catheter. Urine highly ammoniacal. Bowels constipated. Was ordered an enema.

August 26th.—Again catheterized; slept some last night. On the chest and abdomen, find a sudaminous eruption; cuticle in places desquamating. Circulation exceedingly sluggish. Patient has a dusky hue. Pulse 132; temp. 97; resp. 18. Bronchial breathing in the orifices of both lungs; most marked in the left.

P.M.—Bowels again moved by an enema; discharge very offensive.

August 27th.—For the past week, patient has had paralysis of the inferior extremities. Has been unable to walk. Commenced with a feeling of stiffness and pains in the legs, and gradual loss of power. Has slight difficulty in swallowing. This morning, find face flushed; tongue slightly furred; pulse 120; temp. 98½; resp. 16. Legs are almost completely paralyzed; sensation somewhat impaired. The muscles are tender, on pressure, particularly in the legs. Ordered pot. iodide, gr. vi, tr. digitalis, m xx, ter die; also, to have catheter used every six hours, and bowels to be kept free by enema.

August 28th. — Tongue not deflected, but tremulous. Complains of more pain in the legs. There is entire loss of muscular power in the arms. Pulse 120; temp. 99; resp. 20. Left side of face seems drawn; is unable to close the left eye. In winking, can scarcely move the left

eyelid at all. Movements of the eyes are symmetrical.

August 29th.—Pharyngeal muscles becoming more impaired; slept poorly last night; no improvement in any of the symptoms.

September 1st. — Patient's friends took him home, as dissolution was rapidly approaching.

September 2d. — Learned from friends that patient died to-day, but was unable to obtain a post-mortem examination.

Translations.

CLINICAL THERMOMETRY.

FROM THE "COMPENDIUM DER NEUEREN MEDICINISCHEN WISSENSCHAFTEN," BY DR. B. KRAUS.

Condensed and translated by Dr. H. Gradle.

OSCILLATIONS OF PATHOLOGICAL TEMPERATURE.

AFTER having seen how little the physiological temperature is altered by individual peculiarities, or external influences, we shall find that on the contrary the variations in disease are considerable.

A temperature below 38° C. indicates that at the time no fever exists; the nearer, however, that this limit is approached the greater the probability that at another hour it has been exceeded, hence the necessity of repeated observation. While a temperature below 38.4° C. (101.1° F.) may denote merely a febrile tendency, anything beyond that point shows the existence of decided fever. The range of human temperature extends but in rare instances over more than 8° C. (14° F.). The highest animal heat observed by Wunderlich was 44.75° C. (112.5° F.) at the moment of death in a case of tetanus. Alvarenga considers a temperature of 42° C. as a rare occurrence, and not often has he seen the mercury rise to 43° C.; 44° C. has never come under his observation. The minimum temperature was found by Hardy in sclerema 22° C. (71.6° F.); Mignot saw 23° C. in the same disease. [A remark made at this place by the author that 44.5° C. (112° F.) is the maximum ever found in man during life, must be supplemented by a case of spinal injury, lately reported by Teale (*Brit. Med. Journal*, March 6th), in which the mercury reached in *different thermometers* the highest number of the scale, 122° F., and still recovery took place.]

The possible minimum of the tem-

perature can, however, be determined but approximatively, since, according to Wunderlich, errors are most likely to occur at the lower degrees, and even the parts otherwise most reliable as indices do not indicate the correct blood temperature under these circumstances. In most cases the temperature does not fall below 35° C. in the well-closed axilla, and but rarely does it sink as low as 33° or 32° C. Though in some diseases, for instance cholera, a temperature of 26° C. and even less has been found on the surface, other observations render it probable that the vagina and rectum would have given a higher number.

The causes of morbid deviation of temperature are both external influences and constitutional conditions. A reduction can be occasioned through external means, either by increasing the loss of caloric, or by preventing the afflux of *warm* blood to the parts under observation, or, finally, by diminishing the production of heat. Severe degrees of external cold are the surest agent to abstract heat from the body, and when their duration is sufficiently prolonged they may even cause death. An external temperature, however, surpassing or even equalling the animal heat, possesses also a decidedly noxious influence, while it tends to raise the animal temperature. The application of external irritants seems to reduce rather than augment the internal heat. A mechanically induced, intense hyperæmia of a part raises its temperature, while a diminution of blood supply lowers it. Great loss of blood is followed, as a rule, by a lowering of the temperature; a spontaneous moderate hæmorrhage thus causes a reduction of the heat of febrile patients. Persistent starvation can also diminish the temperature considerably, while on the other hand the partaking of food may induce a moderate—and if the food be unsuitable, even a considerable—rise of temperature in disease and convalescence. A number of morbid accidents, as constipation, retention of urine, suppression of menses, etc., often occasion an augmentation of temperature, while diarrhœa (by purgatives), as well as other drains, vomiting (especially from the use of emetics), the influence of alcohol, some narcotics, and various other stronger or weaker poisons, can reduce the animal heat in a greater or less degree.

Amongst remedial agents we possess some capable of reducing a febrile temperature, for instance, digitalis, veratrin, quinine, calomel. A less marked influence is exerted by acids, potassic nitrate, and other salts, though in children, nervous women, and anæmic patients, their refrigerating effects are distinctly noticeable. Other agents, like coffee, musk, camphor, curare, etc., raise the temperature, both in health and disease.

In children and nervous or hysterical women, a marked unstability of animal heat is observable in disease. Not only are a greater rise and variation of temperature occasioned by unimportant affections, but also are the effects of extraneous influences exaggerated in them when compared with less excitable patients. Amongst male adults the nervous temperament and anæmia are also predisposing conditions for a similar impressibility. Advanced age, on the contrary, is accompanied by a greater stability of temperature, so that similar condi-

tions result mostly in a temperature less by one-half degree C. than in younger individuals. Individual peculiarities also seem to exist, and experience has shown that while in some the repetition of certain influences diminishes the thermometric impressibility, in others it augments it.

Division of the cord, or severe injuries, are sometimes followed by a peripheral rise of temperature; in other cases nerve-injuries result in diminished warmth of certain parts, or of the entire body, according to their location. Muscular exertion often produces an increase of animal heat in feeble or sensitive individuals, which should always admonish us to look for other disturbances of health. As Wunderlich remarks, a disease, though not by itself modifying the temperature, may give rise to greater thermometric susceptibility to other influences. This same impressibility, though perhaps less marked, is also noticed in diseases which have by themselves altered the animal temperature. But the more typical the thermometric course of a disease, the less will be the influence of other accidents, while in atypical affections and slight disturbances of health the temperature depends considerably on the various extraneous conditions. In convalescence this impressibility is very considerable, the more so if the disease is still lurking in the organism. The nature of the influence is of some importance; if its direction is in conformity with the tendency of the disease, its effects are most manifest, and *vice versa*. Even the influence of diurnal oscillations is thus evident, an increase of temperature being most easily effected at noon and in the afternoon, while a depression of temperature is most decidedly brought about at night or early in the morning. Therefore the degrees observed at the time of the morning remission are of the highest importance.

Wunderlich has occasionally observed a temperature exceeding the highest degrees usually seen in fever, either not at all accompanied by other febrile symptoms, or, at any rate, by only those pertaining to a lower grade of fever; he applies to this the term *hyperpyrexia*.

TEMPERATURE AS MEANS OF DIAGNOSIS AND PROGNOSIS.

A rise of temperature has always been considered as indicative of fever and its intensity, and since we have seen that in health the variations are minimal, we must look upon all deviations from the normal point as a symptom of disease: if over 37° C. of a febrile tendency proportional in intensity to the degrees exceeding this point; if under 36°, of an algid condition. An augmented heat is often the only symptom of a commencing or still lurking affection; thus the continued existence of an intermittent fever apparently cured is sometimes indicated by it alone. Yet no absolute references can be drawn from any given height of the mercury. While from a great augmentation or decline of temperature danger may be predicted, this is by no means always the case. The other circumstances of a case must therefore be taken into consideration.

In judging of the results of thermometric observation, the time of day must be considered, also the period of digestion—of so much influence in disease—as well as other accidental influences, especially removal of a patient, which may alter the tempera-

ture in either direction. A comparison of the existing temperature with the other symptoms offered must not be neglected, as by these means we may—if these are in marked contrast—detect simulation. If, however, the temperature is high, while no subjective symptoms exist, as is sometimes the case in infectious diseases, the onset of a severe affection may be predicted. Again, during convalescence from such conditions the opposite may occur, viz.: subjective illness co-existing with a normal or even *subnormal* temperature; in that case the state of the animal heat is the guide in our prognosis.

A contrast often exists between pulse and temperature. In the febrile state of adults 80 to 90 beats per minute usually correspond to a feebly febrile temperature, 90 to 108 beats to a moderate fever, 108 to 120 beats co-exist with a stronger grade, while a pulse over 120 indicates high pyrexia. In children, feeble and nervous individuals, the relation is not quite the same, the frequency of the pulse being mostly greater. Other differences also occur; thus exacerbations are sometimes first indicated by the pulse, while remissions may be primarily shown by a reduced temperature. Still less constant is the relation of temperature to frequency of respiration; in collapse an increase of the latter does often occur, though not invariably. In hyperpyrexia, also, could Wunderlich find no definite rules, the breathing being sometimes accelerated proportionately, sometimes retarded. Neither do brain-symptoms always correspond to the thermometric condition, as in adults delirium, etc., are usually concomitants only of a very high fever.

Abnormal deviations of temperature are occasionally noticed in apparent health; for instance, during menstruation, the puerperal state, lactation, dentition, the time of rapid growth, excessive fatigue, mental depression, etc., a rise is sometimes observed. The existence, therefore, of a normal temperature under these circumstances is a good evidence of perfect health, while a morbid increase calls for caution.

An augmented temperature, though not constantly followed by severe disease, calls in all cases for vigilance, and it is advisable to keep the patient in bed until the seguelæ are apparent. In the beginning of an acute febrile disorder, a diagnosis is rarely possible. If the temperature is normal, or but little higher, acute pneumonia, variola, and scarlatina can be excluded. If the normal degree is not at all or but little exceeded in the evening, typhus is not the disease. If, however, the mercury rises considerably at once, the range of possible affections includes the exanthemata, tonsilitis, pneumonia, pleuritis, intermittent fever, influenza, pyæmia, meningitis, typhoid, etc. In many cases the diagnosis is a matter of doubt in the earlier half of the first week. If, during this period, febrile symptoms are accompanied by a temperature normal in the evening, intermittent fever may be suspected, while typhus and typhoid, as well as the exanthemata (with the exception of measles, roseola, and varicella), can be excluded; catarrhal affections, measles, pleurisy, acute phthisis, granular meningitis, and acute rheumatism, are, however, possible. A sub-febrile or slightly febrile temperature is of similar significance; but, if occurring on

the first or second morning, it does not speak against the onset of typhoid fever; this, however, is rendered unlikely by the occurrence of a high temperature within the first days, unless the disease can be shown to have commenced before it was suspected. If a diagnosis has been formed, the comparison of the existing temperature with the temperature incident to the disease at this time may be of service in determining the intensity of the affection.

In the second half of the first week the diagnosis may still be doubtful, the diseases possible being the initial fever of exanthemata, typhus, typhoid, relapsing and intermittent fever, pneumonia of slow onset, intense influenza, and capillary bronchitis, acute miliary tuberculosis, tubercular meningitis, cerebro-spinal meningitis, hepatitis, internal suppuration, osteomyelitis, acute syphilis. Of course a single observation is of little value in these cases. A temperature normal in the evening excludes the exanthemata, typhus and typhoid fever. Hyperpyrexia may indicate an intermittent or malignant infectious fever. If an eruption now occurs, it determines the nature of the disease.

After the formation of a diagnosis, continuous observation gives valuable information as to the progress, intensity, complications, danger, etc. Even a single thermometric examination may now be a useful hint to an examiner well conversant with the thermometric course of the affection; if comparatively high, it points to great severity; yet if, on the contrary, very low, it has less significance, as in most febrile disorders temporary refrigeration may occur. Typhus or typhoid fever can hardly be supposed, if the temperature between the third and tenth is not moderately febrile during day-time, highly febrile at evening (at least 39.6°), unless a reduction has been occasioned by free alvine discharges, hæmorrhage, or an advanced age of the individual. An unusually low temperature may give rise to a suspicion of internal hæmorrhage before the blood has made its way outward. A high morning temperature, near 40°, or an evening temperature of 41°, are grave symptoms in these affections. Of still more import is an excessive heat of the trunk, while the extremities become cold, in collapse. A temperature normal in the morning is not a positive sign of apyrexia. If, in measles, the temperature does not return to the normal after the appearance of the eruption, complications should be looked for. The same is true in scarlatina at a somewhat later period.

[*To be continued.*]

A SIMPLE METHOD OF REMOVING THE TEETH OF CHILDREN.—The operation consists in simply slipping a rubber ring over the tooth and forcing it under the edge of the gum. The patient is dismissed and told not to remove the appendage, which in a few days loosens the tooth and causes it to fall out. Grown children, who shrink from the shock and pain of the dental nippers, may also have their teeth removed by means of the rubber, which is a mild form of treatment.—*Druggists' Circular.*

Editorial Department.

"ONE OF THE LOST ARTS."

THIS is the title of a lengthy paper on blood-letting, read in one of the general sessions of the American Medical Association, during the recent meeting in Louisville, by Prof. S. D. Gross, of Philadelphia. The reading of the paper was listened to with much interest by a large audience, and most of the positions taken by the writer were undoubtedly correct. Yet we regretted to notice what appeared to us a vein of exaggeration in many of the expressions used, and sometimes, though rarely, a fault in the reasoning. It is probable that no one thing has contributed more to create general skepticism concerning everything pertaining to practical medicine than the apparently opposite or contradictory doctrines and modes of practice instituted by different parties and at different periods of time. Hence, it is not desirable, on any occasion, to exaggerate such contradictions. Neither is it quite just, or historically correct, to present the views and practices of extreme men, or men of extraordinary enthusiasm, as true representations of the generation to which they belong. When the author of the paper on "One of the Lost Arts" represents Dr. Rush and his followers as bleeding "in every possible disorder, until, in many cases, no more blood would flow because there was *none left*," to illustrate the indiscriminate use of the lancet at a former period, and then, in reference to the present, declares that "the lancet is an obsolete instrument, * * * and few of the present generation of medical men would, if called upon, be able to open a vein in a scientific and creditable manner," he certainly conveys to the public mind an exaggerated idea of the contrast presented by the two periods. This same tendency to extravagant expressions is seen in his comments on the pernicious effects of *authority* and *fashion* in medicine. Take the following as a specimen: "For nearly a third of a century the doctrine of a change of type in disease has tyrannized over the minds of medical men, and exerted a controlling influence on their practice. Of all these delusions, the latter, often called Toddism, after Dr. Todd, its author, has exercised the most pernicious and baneful effects upon civilized society. Ensconcing itself behind a false position, it has literally enslaved the medical world, entrapping alike the wise and the foolish, and sweeping over human life with a force equal to that of the fiercest and most destructive hurricane." As a specimen of faulty reasoning or induction, take the following: "If the modern practice be right, then the old practice must have been wrong, *deadly wrong*." Does the conclusion really follow the premise? May we not, in medicine, as in many other things, reach the same results by widely different means? May not two physicians, both well versed in

the pathology of disease, and the *modus operandi* of medicine, treat the same disease with nearly equal success by remedial agents of entirely different composition and modes of action? We think few intelligent and thoughtful practitioners will venture to answer these questions in the negative. And if, instead of assuming that different modes of treating disease necessarily implied contradiction and "deadly wrong," we should review more carefully the *modus operandi* of each in its relations to the known laws of physiological and pathological action, it is more than probable that they would be found to be only different methods of reaching the same end; and instead of still further destroying the public confidence by holding up the history of medicine as a volume of self-stultifying contradictions, we would be able to reconcile many of its apparent differences, and arrive at a much more just appreciation of the actual merits of different modes of practice. We do not make these comments from any opposition to blood-letting. For with us the lancet has never become "obsolete." It has had its place in our pocket for forty years, and is still used sufficiently often to see that it is in good order. On the *modus operandi* of blood-letting, and its advantage over mere sedatives, we commend the following extract from the paper of Prof. Gross:

"Before I proceed to speak of local bleeding, let us briefly inquire into the mode of action of venesection, or, in other words, how the removal of blood from the system affords relief in inflammatory affections? This question can be easily answered. In the first place, the abstraction acts spoliatively, diminishing, as the name implies, the quantity of blood both in the part and system. Secondly, it weakens the power of the heart, and thereby prevents it from sending the blood with the same force and velocity into the suffering structures. Thirdly, it unlocks all the emunctories, and thus promotes secretion. Fourthly, it disgorges the vessels at the seat of the disease, restores the circulation, and places the absorbent vessels in a better condition for the removal of effused matter. And, last but not least, it favors the action of other remedies, as purgatives, diaphoretics, diuretics and anodynes.

"But it will be said that all these effects may and can readily be induced by the agency of other remedies, as aconite, veratrum viride, digitalis, mercury, and tartar emetic, and that, too, at much less cost to the system. That these articles are powerful depressants, lowering the heart's action and promoting secretion, no one at all acquainted with their virtues will question; but I deny that they exercise the same beneficial impression upon the vessels at the seat of the inflammation. When blood is drawn freely from a large vein at the bend of the arm, from a large orifice, to an approach to syncope, the vessels at the seat of the morbid action are unloaded, often to such an extent that the affected structures do not exhibit any marked difference in color from those in their immediate vicinity. Thus, for example, in violent conjunctivitis, the mucous membrane, the seat of the disease, always under such circumstances presents a perfectly blanched appearance, however red and engorged it may have been the moment before. Now, what occurs in the eye, in such a case, may rea-

sonably be supposed to take place in any other part of the body when a patient is bled to a similar extent. In pleurisy, one of the immediate effects of the copious extraction of blood is a mitigation of the torturing pain which forms so prominent a symptom in this disease, due evidently to the diminished calibre of the vessels in the pleura, previously in a state of complete repletion. Has any one ever witnessed such an effect from the use of aconite, digitalis, veratrum viride, or tartar emetic? Never. No matter how these articles may be administered, whether singly or variously combined, they are simply depressants, not depressants and evacuants, as the abstraction of blood from a vein or an artery. There is no blanching of tissue from their use, no unloading of distended and crippled vessels, indeed, no direct appreciable effect of any kind.

"The more recent researches in pathological histology furnish a hint not easy to be mistaken as to the most salient treatment of inflammation in its earlier stages. The leading indication is to restore the paralyzed capillaries to their normal tonicity, so as to prevent structural changes in their walls, and facilitate the outward passage of the white globules with which they are choked. It is now well known that in every inflamed area there is marked hyperæmic distention of the blood-vessels, which are often crowded to their utmost capacity with leucocytes, which emigrate through the vascular walls, and, in conjunction with the effused blood-liquor, constitute the most important elements in inflammatory deposits. Hence, the object of treatment should be to restore the capillaries to their normal calibre, through the artificial induction of contraction of their walls, an effect which can be brought about, as is daily witnessed in many of the external inflammations, by cold applications, which, as is well ascertained, produce reflex contraction of the vessels. In inflammation of the more deeply-seated organs and tissues, however, this object can only be attained by spoliative bleeding, whereby the affected capillaries are relieved of their contents. In this way only can their tonicity be restored, the further effusion or migration of cell elements restrained, and the absorption of existing deposits favored.

"Another effect of bleeding, not to be overlooked in this discussion, is the diminution which it causes in the quantity of fibrine and white globules, so remarkably augmented in inflammatory affections. This change, of which I have witnessed many examples, was beautifully illustrated in the case of a young man, nineteen years of age, whom I attended, along with the late Dr. Charles Woodward, of Cincinnati, on account of a severe attack of pleurisy. Blood was drawn on three consecutive days, the first bleeding being performed about thirty-six hours from the commencement of the attack. The fluid, amounting to nearly a quart, was not only greatly buffed, but cupped on both sides of the crassamentum, as is shown in the specimen which is still in my possession. At the second operation, the fluid was buffed but not cupped; and at the third it was merely a little sizy, all pain and active inflammation having by this time disappeared. If such effects follow the use of the articles above mentioned, I am uninformed of the fact."

Society Reports.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, MAY 10TH, 1875.

Reported by E. Warren Sawyer, M.D.

THE Society met at the Grand Pacific Hotel, the President, Dr. Bartlett, in the chair.

This being the annual meeting, the yearly report of the Secretary and Treasurer was called for and read.

The Society then proceeded to the election of officers for the ensuing year, with the following result:

President, Thomas Bevan, M.D.; Vice-President, R. C. Hamill, M.D.; Secretary and Treasurer, Ralph E. Starkweather, M. D.; Recorder, E. Warren Sawyer, M.D.; Censors, Drs. Bartlett and Hyde.

Upon retiring, the President delivered the annual address, the publication of which was called for by the Society. It will appear shortly.

REPORT OF THE SECRETARY OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS, FOR THE YEAR ENDING MAY 10TH, 1875.

Mr. President and Gentlemen:

I have the honor to submit herewith the annual report of the Secretary of the Society, for the third year since its organization.

On the 11th of May, 1874, there were fifty-nine members in active co-operation with the Society, and ten non-residents whose names were carried on the roll. Since that date three have removed from the city and twenty-one have united with us. This leaves eighty-two names of members on the active list. One has been by vote declared an associate member. Deducting this name, with those who have ceased to reside here, from the entire number, we have seventy-eight names of physicians in and about the city who are actively interested in the work of the Society.

We have held twenty-three regular meetings during the year, and one special, making an average of two for each month, with a total attendance of 479, the average attendance upon each meeting being therefore nineteen.

The following reports have been made during the year just closed:

1. On the Absorption Bands of Blood in the Spectroscope.

2. On the Relative Mortality of Surgical Operations in the United States and other countries.

3. On the Relation of Alcoholism and Sexual Diseases to Climate.

4. On the Ætiology and Pathology of Cholera Infantum.

5. On Asiatic Cholera — being a detailed account of its ingress and extension through portions of the United States during the summer of 1873.

6. On a New Method of Introducing Barnes' Dilators.

7. On the Action of Hydrate of Chloral upon the Blood.

8. On Pneumatic Aspiration — its methods and instruments.

9. On General Therapeutics.

10. On Carcinomatous and Scirrhous Neoplasms, with microscopical illustrations.

11. On the Organic Alkaloids of the Cinchona Barks.

The following papers have been read before the Society during the year:

1. On the Microscopy of the Brains of the Insane (with illustrative drawings).

2. On the use of Podophyllin in Acute Rheumatism (pub. *Am. Jour. of Med. Sci.*).

3. On the Eucalyptus Globulus.

4. On the Relative Value of Thermometers for Medical Purposes offered to the Profession.

5. On Puerperal Convulsions, with illustrative case.

6. On the Management of the Third Stage of Labor.

7. On the Employment of Phytolacca Decandra and Guacum in Rheumatic Disorders.

8. On the Action of Salicylic Acid.

The following translations of papers by foreign authors were also presented and read:

1. On the Therapeutic Value of Ipecac in Pulmonary Sweats.

2. On the Examination of the Mucous Membrane of the Uterus (with illustrative microscopic drawings).

The following cases have been reported:

1. Case of double vagina and uterus, with successful delivery of living child.

2. Case of chronic pyelitis.

3. Case of sub-acute meningitis.

4. Case of amenorrhœa.

5. Case of dysmenorrhœa, relieved by topical application of Faradic current.

6. Cases of relapsing fevers.

7. Cases of obscure neuroses.

8. Case of retained menses from vaginal constriction, successfully relieved by surgical interference.

9. Cases from clinic for diseases of heart and lungs—South Side Dispensary.

10. Cases of sub-involution of uterus, relieved by topical applications of nitric acid—in the "Woman's Hospital," State of Illinois.

11. Case of retention of placenta during twelve days.

12. Case of suppurative pleuritis relieved by aspiration.

13. Two cases of epilepsy successfully treated.

14. Case of scirrhus of the stomach, with details of post-mortem appearances and microscopic pathology (illustrated by stained sections under the microscope).

15. Cases of uterine inertia, relieved by actæa racemosa.

16. Case of aspiration of the pericardial sac, partial relief, death, and exhibition of specimen.

17. Two cases of fracture of arm and leg (St. Luke's Hospital).

18. Case of multilocular ovarian cyst successfully treated by electricity and acipuncture.

19. Fatal case of corroding ulcer of the uterus.

20. Case of traumatic epileptiform convulsions.

21. Case of variola arrested by employment of sulphite of soda and carbolic acid.

22. Four cases of land scurvy successfully treated in Cook County Hospital.

23. Two cases of uterine fibroid

tumors relieved by hypodermic injection of ergotine.

24. Case of cerebro-spinal meningitis simulating hydrophobia.

25. Case of successful removal of colloid multilocular ovarian tumor, followed by death, with chart of pulse and temperature record, and exhibition of specimen.

26. History of a singular case of catalepsy, treated in Mercy Hospital.

The following specimens have been presented during the year, in addition to those already mentioned:

1. Nine calculi removed from patient at a single operation.

2. Horn removed from the forehead of a woman fifty-five years old.

3. Portable electro-faradic machines with chloride of silver batteries.

4. Tumor of Dentine.

5. Cast of an anencephalous monster.

6. A novel inhaler for anæsthetic purposes.

During the year Art. I. of the Constitution has been amended so as to exclude candidates for membership who have not been in actual practice for two years, and who may be interested in the sale of medicines and surgical apparatus. Two sections have also been added to Article IV., providing for the election of associate and honorary members; while a new by-law has been added, restricting the privilege of each member to the nomination of but one candidate during the year.

Two important resolutions have been passed, one recommending the delegates of the Society, to both the State and National Medical Associations, to urge upon those bodies the memorializing Congress with reference to the remission of the duties on imported scientific works; the other fixing the annual meeting as the appropriate date for the appointment or election of such delegates.

In accordance with a resolution of the Society, passed Dec. 28, 1874, a committee has been appointed to wait upon the President of the Society, and, in accordance with his expressed wish, examine his specimens of the fungus from the Mississippi River ague bottoms, and report in full to the Society upon the same, as well as upon the paper prepared and read by Dr. Bartlett on the 10th of April, 1873. I am informed by the chairman of the committee that they have waited upon Dr. Bartlett and arranged upon a date for the investigation proposed.

The protracted work and subsequent report of the committee on the relations between physicians and pharmacists are fresh in your recollection, and require no word of comment from one who co-operated with them in detail. It is sufficient to note that the result obtained was all that any reasonable individual could have anticipated at the outset of the inquiry. It awakened a sentiment in the minds of many men connected with the two professions which led them to define for themselves a distinct boundary line between what should and what should not be permitted in the light of the highest ethics.

Nor is it necessary to review the part taken by this Society in the banquet extended by the medical profession of the city to the State Association at the date of its last annual convention in our midst. The large representation of the Society in the

number that enjoyed the festivities of that occasion, and the able address of our President, are remembered by many who are gathered here to-day. Were the recollection wanting, the details published in the transactions of the Medical Society of the State of Illinois for 1874, would vividly recall the occasion. It is proper to add that that was the largest social gathering of the representatives of the medical profession of the city of Chicago that has ever occurred, and so great was the harmony and good feeling fostered by the amenities of the banquet, that not a few have felt it would be a desirable end accomplished if some such social reunion could occur annually.

The thanks of the Society during the year concluded are due to the editors of the two medical journals of Chicago for their kindness in publishing fully all the transactions and papers of the Society that have been submitted to them. The resolution passed Nov. 23d, 1874, requiring that thereafter only the strictly scientific and literary transactions of the association should be spread before the public, reserving for the records the executive and other acts, have improved the character of the published material.

In this connection, it is proper to state that for the accuracy and regularity with which all such matter has been prepared for publication, the Society itself, and the editors of the medical journals, no less, are greatly indebted to the faithfulness of the reporter for the year, Dr. R. E. Starkweather. When it is considered that he has been under the necessity during the entire year of preparing duplicates of each report of the transactions, one for each journal, and that these reports have frequently embodied long debates and abstracts of extended papers and verbal reports, an idea may be had of the actual labor involved in the discharge of his duties. How efficiently he has performed his task you have been in position to determine who have examined the weekly and monthly exhibits of the medical press.

To Dr. F. H. Davis, the editor and publisher of the MEDICAL EXAMINER, the Society is indebted for a bound copy of all the papers and transactions published in that journal during the year 1874. These were collected by Dr. Davis himself, from the mass of material which was at his disposal, and bound in this convenient shape for the purpose of presenting them to the Society.

In concluding this resume of the work accomplished during the past year, it will be apparent, even upon a hasty glance over the field, that the character and amount of original investigation which has been encouraged in our midst, are sufficiently gratifying. It is also sufficient to suggest the conclusion that he who has lost the opportunities afforded here for actual advance in the directions to which the reports have pointed, has failed to secure the absolute advantages provided by the Society. If some there be of this class, they have but one consolation left them, and that is the ability to offset this loss by equally solid advantages gained elsewhere. The species of moralizing which is suggested by the arrival at such anniversaries as the present, is at once natural and necessary. The question comes home to each individual upon such occa-

sions, "Have I, in a satisfactory manner, discharged my duties — not to the Medical Society, but to myself — during the period which has elapsed?"

Now, just here comes in the operation of a principle, which is clearly admitted by all men, and yet which they are quick to lose sight of. Perhaps in consideration of the fact that to-day, after serving in the capacity of secretary for three years, I resign my office to the hand of another, I may be pardoned for a representation of it.

It is a common enough error to conclude that the benefit to be derived from an association of this kind is obtainable by attendance upon its meetings, listening to the papers read, and the discussions which result, and digesting the accumulated information so as to make it the property of the hearer. It is undeniably true that benefit is to be gained by this process, but so inferior is it to the larger improvement of another kind placed within reach of all that the end would not actually justify the expenditure of the time and trouble necessary to secure it.

The most valuable of the advantages afforded by a medical society are certainly *not* those resulting from the information to be acquired at its meetings. For the periodicals and permanent literature which provide the student with the fullest details upon every question, are accessible to each in the office and study. What extempore speaker among us can furnish such instructive pabulum as Murchison, Broadbent, Biesiodecki, or Nelaton? What essayist of our number can compare in brilliancy and depth with Hutchinson, Bennett, Bernutz, or Virchow? Shall we then abandon our efforts, and cease to unite ourselves in the bands of medical organizations?

The answer given by the thoughtful man will be a decided negative, and his reason will be this: The greatest benefit derivable from these associations accrues to the speaker, the writer, the exhibitor, and *not* to the hearer. It is he who, having observed and amassed facts, comes to others with his treasure, and toils in the effort; it is he, I say, who obtains the great benefit of the deed, not he merely who receives his share of the treasure. It is not the *receiving* which makes us richer; it is the giving. He who brings me a fact or an idea is richer than I. It is the gladiator in the arena whose muscles are hardened, whose courage is heightened, whose brain becomes cool and clear, not the listless or interested spectator on the benches.

The American poet, Lowell, has illustrated the truth of this universal law in one of the most finished of his productions. In the "Legend of Sir Launfal," the knight goes forth in quest of the Holy Grail, but returns at the conclusion of a vain and weary pilgrimage, utterly disheartened. It is only when he is quite near his home, and divides his scanty crust with a miserable beggar that he is rewarded by discovering the sacred object of his search.

The knight of the helmet, spear, and shield, has long been succeeded by the man with the microscope, the thermometer and the scalpel. But the latter, no less than the former, will fail to attain the precious end of his researches, if he does not divide by the way his crust of truth with his fellow.

That member of this Society who faithfully discharges his duty to his associates during the ensuing year, will assuredly be the wiser and the stronger for the effort.

JAMES NEVINS HYDE.

REGULAR MEETING, MAY 24, 1875.

Reported by E. Warren Sawyer, M.D.

PROF. THOMAS BEVAN, President, in the chair.

Prof. Freer reported a series of experiments made upon dogs, with a view to ascertaining how long blood may be kept, and afterwards safely transfused into dogs.

First Experiment.—Ten ounces of venous, defibrinated, dog's blood was transfused into another's veins, the blood having stood for seven hours upon ice, but warmed to 95° F. just before the operation. No bad symptoms resulted.

Second Experiment.—Eight ounces of arterial blood, which had been exposed for seventeen hours to the temperature of the laboratory, about 65° F., was transfused with no ill effect.

Third Experiment.—This dog was first bled from the carotid artery, till he could bleed no longer; about twenty ounces being let. Fresh blood was transfused, and dog recovered rapidly.

Fourth Experiment.—First bled to insensibility; respiration had ceased; thirty-two ounces escaping; ten ounces of blood which had previously stood upon ice for forty-eight hours, was transfused. Dog was resuscitated, but died seventeen hours afterward. This was an unfavorable subject for the operation, as it was a dog which had been caught up from the street at the moment, and was greatly frightened.

Fifth Experiment.—This dog was first bled six ounces; then seven ounces of blood, which had been on ice for the previous seventy-two hours, was transfused. Dog recovered.

In all instances, the blood used was defibrinated immediately after being drawn. With one exception, the blood was brought to 95° F. at the moment of transfusion. In this exceptional instance, the blood was accidentally passed into the dog's veins cold, without any bad effect.

Dr. Freer has long been of the opinion, that blood was not as highly vitalized as other tissues; he regarded it rather as food in its most highly prepared shape, and ready for assimilation. By transfusion, the body can be nourished *direct*, independently of the digestive organs. The indication for this operation will be the threatened inanition of the patient. More people die from inanition than we realize. In pulmonary consumption, for example, the patient rarely dies from asphyxia, and very rarely from hæmorrhage, but from the failure of the digestive organs to furnish assimilable food; in other words, from starvation.

In caries about large joints, the patient ultimately succumbs, because the digestive function has failed long before. By supplying the readily assimilated food in the operation of transfusion, we give the digestive organs rest; and in some instances, we may hope for an arrest in the morbid changes, even in so formidable a disease as pulmonary consumption.

In answer to Dr. Starkweather, McDonald's apparatus was used in transfusion.

Answer to Prof. Etheridge. No unsuccessful cases thus far have occurred.

Dr. Simons remarked, that in cases of immediate danger of starvation, small quantities of this blood food might be given, from time to time, just as one would inject hydrate of chloral in the veins, or any other drug.

The President regarded the thought as a most important one; for, in some instances of malignant disease of the digestive tract, which seems alone too slight to cause death, then the threatened starvation might be averted almost indefinitely.

In answer to Dr. Hamill, Dr. Freer said, that if a person should digest no food at all, it will not be necessary to resort to transfusion daily, for the good effects are not so transitory.

Dr. Simons suggested, that it would be an interesting fact to determine by experiment, viz., how long a dog could be kept alive by continuous transfusions, with absolutely no food taken into the stomach.

It was moved by Dr. Hyde, and carried, that Prof. Freer be requested to read a more extended paper on the subject, and exhibit apparatus, details of the operation, etc., at some future day.

Dr. Lester Curtis read a paper on the histological structure of the serous membranes, with reference to certain pathological processes which they may be the seat of. The subject was illustrated with diagrams. The writer had been struck by the fact, that the effect of inflammation of the serous membrane was quite unlike the effect of that process when the mucous membrane was attacked. An explanation of this disparity was to be found in the structure of these membranes. The epithelial covering of the serous membrane can be separated into two layers, between which, coagulable lymph was effused, thus converting the membrane into a true granulating surface, which is always followed by contraction. Unlike this, the epithelial covering of the mucous membrane is not thus separable into two layers.

Dr. Henrotin reported the case of a lady who had suffered a scald of the feet, about two weeks before. Everything was progressing favorably, the healing nearly completed, when she was seized, while sitting in her chair, with palpitation of the heart, and syncope, followed by death in twenty minutes. During life, the lady had frequent attacks of palpitation of the heart, and syncope; once a blowing sound was heard over the aortic orifice.

Dr. Hyde reported a case of pityriasis versicalor in a lady, which he felt emboldened to speak of, because two well-known physicians of this city had treated her with various drugs in large quantities, for liver disease, and finally, for kidney trouble. A single warm bath, and the local ap-

plication of sulphite of soda in solution, was all that was required.

Dr. Wood mentioned, that he had seen thirty cases of this disease in recruits. He had not found it intractable under the use of corrosive sublimate externally.

Dr. Simons spoke of a case in which the hand was passed into the rectum for the purpose of diagnosis. The case was obscure; that of a man who passed masses of fæces through the urethra.

ILLINOIS STATE MEDICAL SOCIETY.

THE Twenty-Fifth Annual Meeting of the Illinois State Medical Society, was held in the Conservatory of Music, at Jacksonville, Ill., commencing May 18th, a large number of delegates being in attendance. The meeting was called to order by Dr. David Prince, Chairman of the Committee of Arrangements, who welcomed the members to the city of Jacksonville.

Dr. J. H. Hollister, President of the Society, responded in a few appropriate remarks, after which the programme of exercises was announced by Dr. Prince.

On motion of Dr. T. D. Fitch, the Secretary, Dr. W. P. Pierce was chosen Treasurer *pro tem.*, in the absence of Dr. Quine, the regular Treasurer.

On motion of Dr. Prince, the assessment was fixed at three dollars per member.

Dr. Prince also moved, that an initiation fee once paid, should not be demanded again after a period of absence, on the part of any member.

After some discussion, the motion was carried.

Subsequently, on Dr. Pierce asking for information, as to whether if a member had paid an initiation fee twenty years ago, and had been absent the intervening years, he was still to be considered a member, Dr. Fitch moved a reconsideration of the motion of Dr. Prince, which was carried—ayes 16; noes 10.

On motion of Dr. Fitch, the order was so amended, that a member loses his membership if he does not attend the meetings of the Society, or pay his dues for a period of five years.

The Standing Committees were next called in their order, and the time fixed to hear such reports as were ready.

Dr. Whitmire, Chairman of the Committee on Nervous Diseases, announced that he had requested Dr. J. S. Jewell to prepare the report, and that he had prepared one.

The Secretary announced that Dr. Charles G. Smith, of Chicago, Chairman of the Committee on Dermatology, had not prepared a report, but desired to be continued on the committee another year. The request was granted.

A report of Dr. J. N. Niglas, of Peoria, on Hernia, was referred to the Committee on Surgery.

Dr. J. W. Freer announced a volun-

teer paper on the subject of Transfusion of Blood.

Dr. Hoyt, of Bloomington, announced a paper prepared by Dr. E. W. Grey, on Small-Pox, together with a series of resolutions on Vaccination, which he asked the Society to adopt. It was referred to the Committee of Arrangements.

Dr. Rumbold, of St. Louis, announced a volunteer paper on the Functions of the Uvula, which was ordered to be read at the convenience of the Society.

The Secretary announced that Prof. L. Curtis, of Chicago, had prepared a paper on the Anatomy of the Serous Membranes, as affecting their Pathology. It was ordered to be read.

A communication was read from the Æsculapian Medical Society, requesting that Dr. William Massey's Essay on Insanity, be read before the Illinois State Medical Society. That gentleman was accordingly invited to read his paper, and this was the first paper read.

It was followed by the reading of Dr. J. B. Walker's Essay on Scarlatina, which was referred to the Committee on Publication.

The next thing was the reading of the paper of Dr. Curtis', on the Anatomy of the Serous Membrane.

After some discussion of the subject by Drs. J. W. Freer, Curtis, and Worrell, the paper was referred to the Committee on Publication.

On motion of Dr. Worrell, the paper of Dr. Massey was referred to the Committee on Publication.

In the afternoon, at 2 o'clock, the Association visited the Deaf and Dumb Asylum, and the Institution for Feeble-Minded Children, spending the time there until 5 o'clock. At 7½ o'clock in the evening, the Society re-assembled, and Dr. J. O. Hamilton, of Jerseyville, read a paper on the Diseases of Children, which was followed by one on the same subject, prepared by Dr. C. W. Earle, of Chicago, read by the Secretary.

After a pretty full discussion of the papers by Drs. E. F. Ingalls, Hamilton, Steele, Fitch, J. H. Mosier, Slater, Gowen, Worrell, Rumbold, and R. C. Hamill, the papers were referred to the Committee on Publication.

Dr. Rumbold, of St. Louis, read his paper on the Functions of the Uvula, which was referred to the Committee on Publication.

Dr. David Prince next delivered an Address on the Use of Electricity in Therapeutics and Surgery, accompanying the address by experiments with electrical machines. He was requested to prepare a paper on the subject for publication in the transactions.

On motion of Dr. Freer, the proposition of Prof. Sanders of the Conservatory of Music, to entertain the Society with a concert, was accepted, and the time fixed for Wednesday evening.

Adjourned.

WEDNESDAY, May 19.

The Society was called to order at 8 o'clock.

Dr. J. W. Freer read his paper on Transfusion, which was referred to the Committee on Publication.

Dr. T. D. Fitch announced that, in connection with the Report of the Committee on Obstetrics, he would present some remarks on several new gynæcological instruments.

A recess of ten minutes was then taken, to allow of the selection of a Nominating Committee. The Committee chosen were as follows:

J. W. Freer, M.D., Cook county; J. H. Mosier, M.D., Whiteside county; D. E. Foote, M.D., Boone county; T. N. Stewart, M.D., Scott county; Thomas H. Whitten, M.D., Montgomery county; M.W. Seaman, M.D., Macoupin county; M. W. Walton, M. D., Stephenson county; F. B. Haller, M. D., Fayette county; E. Wenger, M.D., Iroquois county; D. Lichty, M. D., Ogle county; L. B. Slater, M.D., Christian county; W. A. Haskill, M.D., Madison county; A. P. Tenney, M.D., McLean county; Fred. Cole, M.D., Woodford county; D. L. Wood, M.D., La Salle county; Samuel Mileham, M. D., Adams county; P. H. Garretson, M.D., McDonough county; T. J. Maxton, M. D., Henderson county; G. W. Albin, M.D., Cumberland county; W. L. Goodell, M. D., Effingham county; A. F. Darrah, M.D., Champaign county; J. S. Williams, M.D., Jersey county; Geo.W.Wright, M.D., Fulton county; W. H.Veatch, M.D., Green county; J. G. McKinney, M.D., Pike county; W. G. Cochran, M.D., De Witt county; J. V. Frazier, M.D., Mercer county; C. T. Wilbur, M.D., Morgan county; J. N. Allen, M. D., Brown county; J. L. Hayes, M.D., Edgar county; D. H. Alris, M.D., Henry county.

After the recess, Dr. E. B. Cooke submitted his report on Practical Medicine, which was followed by a paper by Dr. R. C. Hamill on the Treatment of Rheumatism by phytolacca and guiaca. The papers were discussed by Drs. Steele, Cooke, Birney, Herriott, Wright, Hay, and Edgar of St. Louis, and were referred to the Committee on Publication.

Dr. E. Powell next read the report of the Committee on Surgery, which was followed by one on Hernia, by Dr. E. L. Herriott.

Dr. David Prince exhibited an instrument for taking up the stitch in operations on soft palate and in skin planting. Adjourned.

In the afternoon the Society met, at 2 o'clock, to witness the operation of transfusion performed upon a dog by Dr. J. W. Freer, aided by Drs. E. Powell and Walter Hay.

At the conclusion of this the members took the street cars, and visited the State Hospital for the Insane, and the Asylum for the Blind.

In the evening the President, Dr. J. H. Hollister, delivered his annual address before a large audience, the platform being occupied by the Ex-Presidents present, Drs. Hamilton, McFarland, Worrell, Steele, Haller, and Prince. At the conclusion of the address, Dr. Prince offered a resolution expressing the thanks of the citizens of Jacksonville for the pleasure they had in listening to the eloquent and scholarly address of the President. The resolution was unanimously adopted. The remainder of the evening was devoted to a concert given by the Illinois Conservatory of Music.

THURSDAY, May 20.

The Association re-assembled at 8 A. M.

The paper of Dr. Niglas, on Hernia, was referred to the Committee on Publication.

Dr. W. P. Pierce read a paper on Fractures, which was referred to the committee.

Dr. Haller, chairman of the Nominating Committee, submitted his report, which, after some discussion and amendment by the committee, was submitted as follows:

REPORT OF THE NOMINATING COMMITTEE — OFFICERS FOR THE ENSUING YEAR.

President, Thomas D. Washburn, M.D., Hillsboro; First Vice-President, J. L. White, M.D., Bloomington; Second Vice-President, John Wright, M.D., Clinton; Treasurer. John H. Hollister, M.D., Chicago; Per. Secretary, T. Davis Fitch, M.D., Chicago; Ass't Secretary, C. B. Johnson, M.D., Tolona.

STANDING COMMITTEE.

Board of Censors. — E. Wenger, M.D., Gilman, *Chairman;* E. Ingals, M.D., Chicago; E. L. Herriott, M.D., Grafton.

Committee of Arrangements.—S. H. Birney, M.D., Urbana, *Chairman;* A. F. Darrah, M.D.; J. T. Pearman, M.D., Champaign.

Practical Medicine.—Wm. Massey, M.D., Grand View, *Chairman;* D. L. Jewett, M.D., Watseka; J. W. Fink, M.D., Hillsboro.

Committee on Surgery. — Moses Gunn, M.D., Chicago, *Chairman;* A. C. Rankin, M.D., Loda; John G. Hays, M.D., Paris.

Committee on Obstetrics. — M. W. Walton, M.D., Ridott, *Chairman;* C. Goodbrake, M.D., Clinton; D. E. Foote, M.D., Belvidere.

Drugs and Medicines.—J. H. Etheridge, M.D., Chicago, *Chairman;* T. J. Pitner, M.D., Jacksonville; H. H. Hood, M.D., Litchfield.

Necrology. — G. W. Albin, M.D., Neoga; Wm. Chambers, M. D., Charleston; J. N. Niglas, M.D., Peoria.

Ophthalmology. — E. L. Holmes, M.D., Chicago.

Otology.—F. C. Hotz, M.D., Chicago.

SPECIAL COMMITTEES.

Diseases of Children.—J. L. Williams, Otterville.

Medical Jurisprudence.—M. A. McClellan, M.D., Knoxville.

Dermatology.—J. N. Hyde, M.D., Chicago.

Progress in Physiology. — Sarah Hackett Stevenson, M.D., Chicago.

Idiocy.—C. T. Wilbur, Jacksonville.

Neurology. — Walter Hay, M.D., Chicago.

Gynæcology. — A. Reeves Jackson, M.D., Chicago.

Hygiene.—John Little, M.D., Leroy.

Diagnosis and Extirpation of Tumors.—W. L. Goodell, M.D., Effingham.

Empiricism. — J. F. Todd, M.D., Galva.

Prudence in the Administration of Therapeutic Agents.—E. Ingals, M.D., Chicago.

Uterine Displacements.—F. D. Fitch, M.D., Chicago.

Staphyloraphy—David Prince, M.D., Jacksonville.

Electro-Therapeutics. — Plym S. Hayes, M.D., Chicago.

Place of Meeting.—Urbana, Champaign Co.

The report was adopted.

Dr. T. D. Fitch submitted some new gynæcological instruments, with explanations. A discussion followed, which was participated in by Drs. Cooke, Edgar, of St. Louis, Frazier, and Boal.

Dr. David Prince also exhibited several similar instruments with explanations.

Dr. Pierce read an abstract of a report on Surgery. The report was referred to the Publishing Committee.

Dr. E. Ingals, Chairman of the Committee, submitted his report on Necrology. It included memoirs of Drs. G. W. Young, of Aurora, and J. V. Z. Blaney, of Chicago.

The report on Nervous Diseases, by Dr. J. S. Jewell, was next received and referred to the Publication Committee.

Dr. Prince declining to serve on the Committee on Galvano-Therapeutics for next year, his resignation was accepted. Dr. William Hay, of Chicago, was appointed to prepare a paper on Electro-Therapeutics.

Resolutions were adopted requesting Congress to place the medical corps of the army of the United States on an equal footing with the officers of other army corps.

Dr. T. D. Fitch read a report prepared by Dr. H. A. Johnson, of Chicago, on Phthisis, which was referred to the Committee on Publication.

The Secretary exhibited an improved stethoscope, which Dr. Curtis explained.

The resolutions proposed by Dr. E. W. Gray, of Bloomington, on the regulation, by a State enactment, of the subject of vaccination in all public schools, asylums, etc., were read and adopted.

On motion of Dr. Haller, Dr. Prince was appointed a special committee on Staphyloraphy.

The Secretary submitted a report of the members present, and the Society adjourned until 2½ o'clock in the afternoon.

The Treasurer's Report was read and accepted.

Also the Secretary's Report, and the report of the Committee on Publication.

On motion of Dr. Freer, the Secretary was voted a salary of $100.

After some discussion in regard to the delay in printing the transactions, Dr. Hay submitted the following, which was adopted:

Resolved, That at the next and at all subsequent meetings, all reports of committees, and other papers designed for publication in the transactions of this Society, be furnished in form ready for publication, and placed at the disposal of the Publication Committee.

The following named persons were appointed delegates to the next session of the American Medical Association:

S. C. Plummer, M.D., Rock Island; Walter Hay, M.D., Chicago; J. F. Todd, M.D., Galva; J. B. Rood, M.D., Lemont; D. E. Foote, M.D., Belvidere; F. B. Haller, M.D., Vandalia; J. W. Freer, M.D., Chicago; J. H. Hollister, M.D., Chicago; W. P. Pierce, M.D., Lemont; Moses Gunn, M.D., Chicago; N. S. Reed, M.D., Chandlerville; H. B. Buck, M.D., Springfield; Thomas J. Whitten, M.D., Irving; Wm. L. Goodell, M.D., Effingham; David Prince, M.D., Jacksonville; G. Wheeler Jones, M.D., Danville; J. Adams Allen, M.D., Chicago; E. P. Cook, M.D., Mendota; A. F. Darrah, M.D., Urbana; M. W. Walton, M.D., Ridott; M. Sheppard, M.D., Pason, Adams Co.; C. Goodbrake, M.D., Clinton; J. O. Hamilton, M.D., Jerseyville; Lester Curtis, M.D., Chicago; T. D. Fitch, M.D., Chicago; E. R. Willard, M.D., Wilmington; Wm. A. Haskill,

M.D., Edwardsville; Robert Boal, M.D., Peoria; C. T. Wilbur, M.D., Jacksonville; J. M. Steele, M.D., Grand View; L. Clark, M.D., Rockford; O. Everett, M.D., Dixon; T. D. Washburn, M.D., Hillsboro; Wm. A. Elder, M.D., Bloomington; C. Paul Simon, M.D., Chicago; E. Ingals, M.D., Chicago.

Iowa.—Walter Hay, M.D., Chicago; T. D. Fitch, M.D., Chicago.

Missouri.—F. B. Haller, M.D., Vandalia.

Indiana.—W. W. McMann, M.D., Gardner.

Minnesota State Medical Society.—L. C. Plumm, M.D., Rock Island.

New York State Medical Society.—W. P. Pierce, M.D., Lemont.

Resolutions expressive of the gratification of the members with their treatment by the citizens of Jacksonville were adopted, also a resolution thanking the President, Dr. Hollister, for the skill and wisdom he had displayed as presiding officer, was unanimously adopted, and, after a few farewell words from the President, the Society adjourned.

Gleanings from Our Exchanges.

BASTIAN ON THE GERM THEORY OF DISEASE.

From London Lancet, April, 1875.

AT the meeting of the Pathological Society of London, on April 6th, Dr. Bastian opened the discussion by an address on the germ theory of disease, viz.: the causal relation between certain virulent inflammations or specific diseases, and the presence of low organisms in the affected tissues. He alluded to the two main theories in vogue; the one which ascribes the origin of such diseases to certain ferments, or substances allied to the ferments, which Pasteur had at one time believed and stated to be the cause of all fermentative and putrefactive processes; the other the physico-chemical theory which Liebig had advanced more than twenty years ago, and which, as it may be stated at the present day, affirms that living organisms, though they may act as ferments, act in this capacity merely by virtue of the chemical changes which the carrying on of their growth necessitates; and that other chemical changes taking place during the decay of organic matter, may make fragments of it (in the dead state) almost equally capable of initiating fermentative changes in suitable media; while in either case bacteria or allied organisms are prone to be engendered as correlative products.

In regard to the special question whether gonorrhœa, purulent ophthalmia, erysipelas, hospital gangrene, puerperal fever, pyæmia, septicæmia, and the like, are due to the presence of low organisms, he states the following facts in opposition to such a view: 1. The experiments of many investigators prove that the alleged causes of disease may be actually introduced into the blood-vessels of low animals by thousands without producing any deleterious effects in a large majority

of the cases. 2. Bacteria, if not actually to be found within the blood-vessels of healthy persons, do nevertheless habitually exist in so many parts of the body in every human being, and in so many of the lower animals as to make it almost inconceivable that these organisms can be causes of disease. In healthy persons they may be found in myriads in and about the epithelium of the whole alimentary track from mouth to anus; they exist throughout the air-passages, and may be found in mucus coming from the nasal cavities, as well as in that from the minute bronchi; they are absorbed in immense numbers with the food; and lastly, in persons with open wounds, bacteria are constantly to be found in contact with such surfaces, especially if the wounds are not well cared for, though the injured person does not necessarily suffer at all in general health. 3. The argument that the bacteria of such diseases are different from those of health has yet to be proved, while, on the other hand, it has been shown that the forms which these two organisms exhibit are probably due to the peculiar conditions in which they find themselves. 4. The virulence of certain contagious mixtures diminishes in direct proportion to the increase of the bacteria in them, and again, fresh and contagious menstrua lose hardly any of their virulence by being subjected for a few minutes to a temperature of 212° F., and after being boiled in alcohol, both of which experiments, the author states, are known to be destructive to all recognized forms of living matter.

The presence of bacteria in the fluids and tissues of diseased persons, Dr. Bastian explains by the fact that certain changes have previously taken place in the constitution and vitality of such fluids and tissues, and that bacteria and allied organisms have appeared therein as pathological products.

As to the question whether the germ theory is applicable to artificial tuberculosis, syphilis, typhoid, typhus, relapsing fever, cholera, measles, scarlet fever, small-pox, and other contagious fevers, the following statements are made: 1. With two exceptions, no definite germs or organisms are to be met with in the blood of patients suffering from these diseases during any stage of their progress. 2. The virus or contagion of some of these diseases, whatever it may be, does not exhibit the properties of living matter. 3. The virus of most of these contagious diseases with which definite experiment has been made, is most potent in the fresh state, while its power diminishes in intensity as organisms reveal themselves more abundantly in it. Reference is made to the facts mentioned by Obermeier, that the blood of relapsing fever patients exhibited spirilla, and to the statements of Klein, who claims to have discovered certain peculiar bodies among the lesions of typhoid fever, especially in Peyer's patches, while there are two diseases, sheep-pox, or ovine small-pox and splenic fever, a disease occasionally communicated to persons from cattle, where it is now said there are certain low organisms in the tissues that appear to have some causal relation with the diseases. Our present notion of zymotic or ferment disease must, however, according to Dr. B., be subjected to modification, if we regard such diseases as due to the operation of low organisms in the sense that Pasteur claimed fermentation was due to the multiplication of such agents. The real fact is, that Pasteur and his followers have modified these views so considerably that it is now acknowledged that such organisms are not essential factors in fermentation, and, indeed, such processes may go on quite independently of them; fermentative changes are produced under the influence of altered chemical processes taking place in unhealthy vegetal tissue.

Some such chemical action, it is suggested, may be at work in these diseased processes, and some of the complex compounds may be thrown off, and act as contagious principles.

ZEISSL'S MODE OF INTRODUCING LIQUIDS INTO THE MALE BLADDER WITHOUT THE USE OF THE CATHETER.

BY A. ROSE, M.D., NEW YORK.

From New York Medical Record, May 8th, 1875.

AS the use of the catheter in injecting liquids into the bladder does harm to the mucous membrane in hæmorrhage, a new method has been invented by Dr. H. Zeissl, of Vienna (*Wiener Med. Wochenschrift*, 1874, Nos. 51 & 52). He simply fits the point of an irrigator into the mouth of the urethra, while the patient is placed on his back with raised nates, the penis being stretched along the abdominal walls.

I have employed this method on one of my patients under the following circumstances: M. K., 60 years old, having retired from active business, and leading a life of ease, is the father of a healthy and numerous family, having always been healthy, with the exception of a gonorrhœa contracted forty years ago, was seen by me for the first time on March 22d, 1875. The patient complains for two weeks of frequent and painful micturition. The urine is turbid, and contains a large quantity of muco-purulent sediment. He is feverish, has neither sleep nor appetite. I tried to enter the bladder with a double catheter, but did not succeed on account of strictures. I then tried dilatation, beginning with a No. 6 steel sound, and finally succeeded in introducing No. 12. The first dilatations were painful, and followed by chills. In spite of the administration of quinine and the hypodermic use of morphine, the patient claimed to have these chills still. He refused to let me make an incision into the strictures. On April 8th I introduced a double catheter, No. 10, which I connected with a fountain syringe filled with tepid water. Mucus and blood coagula filled one canula to such an extent that while the water entered freely, it could return only through one channel. During and after the introduction of the catheter there was great pain and fever. I saw the patient again on April 12th. The urine was clearer, and but little sediment was found. For internal use I had ordered the bicarbonate of soda, and lime water with milk, and Vichy water to be used alternately. Want of appetite and sleep still existed.

Having in the meantime read of Zeissl's method, I introduced a glass tube into the urethra, having first connected it with the India-rubber tube of a fountain syringe which contained about eight ounces of a tepid solution of tannin, which I allowed to pass into the urethra from a height of four feet. The patient experiences, after half a minute, while the liquid entered the bladder, a feeling of comfort, just as described by Zeissl's patients. I removed the glass tube as soon as the liquid began flowing out of the urethra alongside of the tube. The patient, feeling a desire to pass the water, emptied a liquid containing mucus and tannin.

April 13th. There is a decided improvement in every respect; the urine is nearly clear, there being but a very small quantity of sediment. The patient has been able to sleep a few hours.

April 14th. Renewed introduction of solution of tannin into the bladder.

April 15th. Patient has slept better than ever since he took sick; has no fever; his appetite is returning, and he feels altogether encouraged. Steel sound No. 12 passed for the first time with ease and without leaving any pain.

TREATMENT OF DIPHTHERIA—Dr. H. V. Sweringen publishes in the Philadelphia *Medical Times*, an account of his method of treating diphtheria. He has little or no faith in local treatment, except in cases where it is absoluteny necessary to remove excessive mechanical obstruction of the air passages, or to correct the fœtor by disinfectants. The line of treatment pursued was as follows:

℞.—Quin. sulph., gr. xxxij.;
Acid. tannic., gr. x.;
Syr. simp., f ℥ ii.;
Tr. ol. menth. pip., gtt. iij.—M.
Ft. mist.

Sig.—A teaspoonful every three hours until cinchonism is induced.

After which he administers the following:

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Potassii bromidi, ℥ ij.;
Syr. simp.;
Tr. cinch., co., aa f ℥ i.—M.
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The above may be given alternately with the following:

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QUOT HOMINES, TOT SENTENTIÆ.—We are not quite satisfied with the result of the election of the president. It is not that we grudge Dr. Sims the honor that comes to him; he has a well-earned and world-wide reputation, and we have no doubt will do credit to the position; but we think the choice might have fallen upon others whose associations are more strictly American [or Boston?], and who are more generally looked up to as leaders of the profession.—*Boston Journal*, May 13, 1875.—*Cin. Clinic.*

AMERICAN MEDICAL ASSOCIATION.—By request of many members, I will shortly issue a pamphlet edition of the minutes of the Louisville Session. Those who desire copies should remit fifty cents at once, as a limited edition will be printed. WM. B. ATKINSON,
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STATISTICS OF A HUNDRED CASES OF OPERATIONS FOR STONE.—Sir Henry Thompson has given a brief record of his last hundred cases of operation on the adult, excluding all cases below 22 years of age, of which there happened to be one. There are in the list only four cases below 50, sixty-five cases being above 60, and the mean age of the entire list of cases being not less than 63½ years. The first operation of this series was done shortly before Christmas of 1872, and the record represents all his work in this direction for two years and a quarter, the case of the Emperor Napoleon being the third of the series. Ninety-six were adult males, and four were adult females. Of the ninety-six males eighty-seven were operated on by lithotrity, and nine by lateral lithotomy.

The mean age of the eighty-seven operated on by lithotrity was 63½ years, the oldest being 83, the youngest 22, but only four were below 50 years.

The mean age of the nine operated on by lithotomy was 63½ years also, their ages being also between 36 and 79. Among the eighty-seven operated on by lithotrity were four deaths; the ages were 65, 65, 66, and 81. Among the nine operated on by lithotomy were two deaths, viz., at 61 and 63. Thus it is observed that there was a total of six deaths in ninety-six patients, by the two operations, with a mean age of 63½. In this series allusion is made to what may be termed an extraordinary run of luck. It was a succession of fifty-one elderly cases without a single death, these cases having a mean age of 64 years. The author states that he hopes soon to publish his experiences in an unbroken series of five hundred cases in the adult male, besides the cases of women and children.—*The Lancet*, April 3, 1875.

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VENEREAL ULCERS.—Dr. Godon (*Pacific Medical Journal*) publishes a series of cases of venereal ulcers treated with iodoform, and concludes his paper with the following remarks:

1. That iodoform is a therapeutic agent producing more certainly, and more promptly than all others ordinarily employed, the cicatrization of syphilitic ulceration in general.

2. That in the treatment of chancroids, iodoform is in some manner a specific by the promptitude with which it produces cicatrization, and this too without pain.

3. That iodoform in the treatment of simple or virulent buboes can be employed in the form of an ointment as a resolvent during the early stage, with more success than any other agent.

4. Iodoform acts as a topical agent and also as a local anæsthetic. That by its employment in these cases it effects a cure without producing any pain, obviating the dread of burning and the attendant pain which deter so many unfortunates from applying immediately to the surgeon for relief. That the rapid cicatrization which it causes is owing to the simplicity of the dressing, which does not irritate the diseased parts, to the absorption of the secretions by the iodoform powder, to the antiseptic properties of the medicament, and to the presence of iodine, which acts favorably on venereal ulcerations in general.

TREATMENT OF ANAL VEGETATIONS.—M. Cruveilhier, of the Hopital St. Louis, believes with the majority of surgeons, that these sessile or pediculated vegetations are not dependent on the syphilitic virus, and that therefore internal treatment is not appropriate. They must be destroyed locally in a radical manner, for if a single one is allowed to remain, however small it may be, it will form the starting point of new vegetations, which will multiply without measure. He has employed excision with curved scissors, followed or not by cauterization with diluted perchloride of iron. But he prefers a milder and more efficacious remedy, pure chromic acid, which, applied to the small tumors, the healthy parts being protected, mummifies them and causes their decay. This caustic is less painful than nitric acid, or acid nitrate of mercury, and less often causes inflammation in the neighborhood. If these means fail, the operation of removal with the knife must be resorted to.—*Revue de Therap.*, 15, 1874.—*The Doctor.*

NON-NITROGENOUS DIET. — Last year we called attention to the experiments of Prof. Parkes on the effects of an absolutely non-nitrogenous diet.

Dr. Andrew, in the new volume of "St. Bartholomew's Hospital Reports," informs us that he has submitted eight cases of acute rheumatism to this diet, which he believes promises better results in this disease than any other treatment. The pains disappeared on the average in 3.75 days; the longest time being 5, the shortest 2.

It is to be remarked, that only young patients whose powers of nutrition are unbroken, are likely to bear with benefit this powerful method of treatment; and even in these it cannot be continued very long. Dr. Parkes himself showed that the power of the heart is greatly reduced by this diet within twenty-four hours. It would seem, therefore, that such a plan is only adapted for acute cases. Nevertheless, Dr. Moss, of the Royal Naval Hospital, Esquimalt, Vancouver's Island, has applied it, though without much success, to *chronic* rheumatism, which it appears is very common in that island. The diet adopted was that given by Dr. Parkes, with the addition of tapioca pudding without milk or eggs. It consisted of arrowroot cakes made with butter, and sometimes with sugar or treacle. Dr. Moss gives the details of the weights and quantities. The bowels became regular, the rheumatic pains lessened, and dyspepsia disappeared.—*The Doctor.*

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Original Communications.

THE VERDICT OF SCIENCE CONCERNING THE EFFECTS OF ALCOHOL ON MAN.

BY N. S. DAVIS, M.D.

Read to the National Temperance Convention, June 2d, 1875.

ALCOHOLIC liquids, as derived from the fermentation of various fruits and vegetable substances, have been known and used from an early period in the history of our race. Being derived from the grape or fruit of the vine chiefly, the name vinum, or wine, was naturally applied to all these liquids, until some time in the seventh century, when a liquid obtained from the fermentation of corn began to be called beer by the Saxons.

During the prevalence of the Alchemists' or Arabian school of chemistry, in the eleventh century, the vinous liquids in use began to be subjected to distillation, by which the active intoxicating constituent was obtained in a concentrated form, to which was applied the name "spirit of wine," and afterwards the word "alcohol." This last word appears to have been first used by the Arabians to designate an impalpable cosmetic powder used by the women of that day. It was afterwards applied to various subtle powders, and finally to spirit of wine. The first really scientific use of the term "alcohol" with which we are acquainted was by Lemert in his chemistry, published in 1698. For a long period after the discovery of spirit of wine or alcohol, it was used only as a solvent or menstruum in the preparation and preservation of other substances, while the fermented liquids continued to be used as drinks. The impure and diluted alcohols derived from distillation of fermented liquids, known as brandy, gin, rum, and whisky, are of modern origin, having been introduced into use within the

last two or three centuries. Although we have a large variety of beverages derived from fermentation and distillation, known as wines, beers, and distilled spirits, yet ethylic, or absolute ether, universally known under the name of alcohol, constitutes the active, controlling ingredient in them all. The amount of this alcohol in the fermented drinks, called wines, beers, ales, etc., varies from four to twenty per cent.; while in the distilled spirits, called brandy, whisky, rum and gin, it constitutes from fifty to seventy-five per cent. Separate the alcohol from all these liquids, and the remainder would be capable of producing very little more effect on the human system than pure water. The juniper in gin, the hop in beer, and the vegetable acids and fecula in wines, are in quantities too small to exert any important influence, and hence may be omitted from our further consideration.

When we speak of alcohol, therefore, or of the effects of alcohol, throughout the remainder of this paper, we mean to include all alcoholic liquids, whether fermented or distilled. Until analytical and organic chemistry had made sufficient progress to show the composition of the more common articles of food and drink, no efforts were made to explain the special or physiological action of alcohol on the human system. All liquids containing it, were simply regarded as cordial or stimulant, and capable of supporting strength and life. When the chemico-physiological school of investigators, with Baron Liebig at its head, developed the fact that all alimentary substances were capable of being arranged into two classes, the nitrogenous and carbonaceous, they very naturally adopted the theoretical idea that the former when taken into the system were appropriated to the nourishment of the tissues, while the latter united with oxygen by a species of combustion, resulting in the development of animal heat and carbonic acid gas, and hence were familiarly styled "respiratory food."

Alcohol, being one of the purest of the carbonaceous class, and especially rich in carbon and hydrogen, was at once assigned a place at the head of the list of respiratory foods, and of supporters of animal heat. When taken into the living system, it was supposed to unite rapidly with the oxygen received through the lungs, evolving heat, and leaving as resultants carbonic acid gas and water; in this way its supposed heating and stimulating effects were explained.

The simplicity of the explanation, coupled with the high authority of Liebig, caused it to be almost universally accepted, although resting on a purely theoretical basis, without a single experimental fact for its support. It was not long, however, before Dr. Prout, of London, ascertained by direct experiment, that the presence of alcohol in the human system directly diminished the amount of carbonic acid gas exhaled from the lungs, and consequently there could be no combustion or oxydation of the alcohol by which it was converted into carbonic acid and water. Dr. Percy and others, by examination, found that alcohol taken in a dilute form into the stomach, was taken up without change of composition, and carried with the blood into all the organs and structures of the body; and that its presence could be easily

detected by the proper chemical tests. The chemico-physiologists, however, still assuming that alcohol, being a hydro-carbon, must necessarily be used for maintaining temperature and respiration, suggested that the union of its elements with oxygen might be such as to result in forming acetic acid or aldehyde instead of carbonic acid gas. Hence they still sustained the popular belief that alcoholic drinks were capable of increasing both the temperature and strength of the human body. In the meantime, the process of experimentation went on. Dr. Boker, of Germany, by a well-devised and carefully-executed series of experiments, proved that the presence of alcohol in the living system, actually diminished the sum total of eliminations of effete matter daily; and consequently, that its presence must retard those molecular changes by which nutrition, secretion, and elimination are effected. In 1850, the writer of this paper prosecuted an extensive series of experiments to determine the effects of different articles of food and drink on the temperature of the body, and on the amount of carbonic acid excreted from the lungs. These experiments proved conclusively that, during the active period of digestion after taking any ordinary food, whether nitrogenous or carbonaceous, the temperature of the body is always increased; but after taking alcohol in the form of either fermented or distilled drinks, the temperature begins to fall within half an hour, and continues to decrease for from two to three hours. The extent and duration of the reduction of temperature was in direct proportion to the amount of alcohol taken. The results of this series of experiments were embodied in a paper read to the American Medical Association in May, 1851. [See *Northwestern Medical and Surgical Journal* for 1851.] A few years later, the experimental researches of Lallemand, Perrin and Duroy, proved conclusively that alcohol, when taken into the stomach, was not only absorbed and carried with the blood into all the organs and tissues of the body, but also that it was eliminated as alcohol, unchanged chemically, from the lungs, skin, and kidneys. The experiments of Prout were repeated, and his results confirmed by Sandras and Bouchardet, of France; W. A. Hammond, myself, and others of this country. Those of Boker were carefully repeated and varied by Anstie, of England, and Hammond, of this country. My own in reference to the effects of alcohol on animal heat have been repeated, and the results confirmed by a large number of observers, among whom are Drs. Richardson, Anstie, and Hammond. Those of Lallemand, in reference to the elimination of alcohol, have been equally confirmed, except the claim that the amount eliminated is not equal to the whole quantity taken. Hence the following propositions may be stated as fully established scientific facts:

First.—That alcohol, when taken diluted in the form of fermented or distilled spirits, is rapidly absorbed without change, carried into the blood, and with that fluid brought in contact with every structure and part of the human body.

Second.—That, while circulating in the blood, its presence retards those molecular or atomic changes by which nutrition, disintegration, and secre-

tion are maintained, and the phenomena of life continued.

Third.—That its presence retards the elimination of waste matter, impairs nerve sensibility, lessens muscular excitability, and lowers the temperature of the body.

Fourth.—That a part, at least, of the amount taken is finally eliminated or thrown out of the system with the excretions, without having undergone any appreciable chemical change.

These facts are as well established as any in the domain of physiology, or in the whole field of natural science, and they point with all the clearness and force of a mathematical demonstration to the conclusion, that alcohol is in no sense food; neither furnishing material for the tissues, nor fuel for combustion, nor yet generating either nervous or muscular force. Having thus determined, experimentally, that alcohol is neither food nor a generator of force in the living body, the question recurs, What are its positive effects when taken in the ordinary manner? I answer, simply those of an anæsthetic and organic sedative. Like ether and chloroform, its presence diminishes the sensibility of the nervous system and brain, thereby rendering the individual less conscious of all outward and exterior impressions. This diminution of sensibility, or anæsthesia, is developed in direct ratio to the quantity of alcohol taken, and may be seen in all stages from simple exemption from all feeling of fatigue, pain, and idea of weight, exhibited by ease, buoyancy, hilarity, etc., to that of complete unconsciousness, and loss of muscular power. It is this anæsthetic effect of alcohol that has led to all the popular errors and contradictory uses, which have proved so destructive to human health and happiness. It has long been one of the noted paradoxes of human action, that the same individual would resort to the same alcoholic drink to warm him in winter, protect him from the heat in summer, to strengthen when weak or weary, and to soothe and cheer when afflicted in body or mind. With the facts now before us, the explanation of all this is apparent. The alcohol does not relieve the individual from cold by increasing his temperature; nor from heat by cooling him; nor from weakness and exhaustion by nourishing his tissues; nor yet from affliction by increasing nerve power; but simply by diminishing the sensibility of his nerve structure, and thereby lessening his consciousness of impressions, whether from cold, or heat, or weariness, or pain. In other words, the presence of the alcohol has not in any degree lessened the effects of the evils to which he is exposed, but has diminished his consciousness of their existence, and thereby impaired his judgment concerning the degree of their action upon him.

It is this property of alcohol to produce that sense of ease, buoyancy, and exhilaration, arising from a moderate diminution of nerve sensibility, that gives it the fascinating and delusive power over the human race, which it has wielded so ruinously for centuries gone by. But while the presence of alcohol diminishes the sensibility of the nervous structure, it also retards all the molecular changes, thereby diminishing the activity of nutrition, secretion, elimination, and the evolution of heat, constituting a true organic sedative. When taken

in small quantities, repeated daily, the individual usually slowly increases in weight, not from increased nutrition, but from retarding the waste and retaining the old atoms longer in the tissues. By some investigators, this power to retard atomic changes and consequently to retain the old atoms, has been regarded as equivalent to nutrition, or the actual assimilation and addition of new atoms. It is on this basis that Dr. Hammond and a few others persist in representing alcohol as indirect food. The fallacy of such claim, and its mischievous tendency, will be fully apparent by reference to one of the plainest laws governing living animal matter. The law is, that all the phenomena of animal life are associated with and dependent on atomic changes, and that each individual cell or aggregation of bioplasm constituting an organic atom, has its determinate period of growth, maturity, and dissolution. Hence, to introduce into the living system any agent that will retard atomic change, is equivalent to retarding the phenomena of life. And if by retarding the atomic changes, cells or atoms are retained in the tissues longer than the natural duration of their activity, such retention may increase the bulk and weight, but in the same ratio it embarrasses the tissues with the presence of material which is constantly becoming inert and tending to degeneration. Consequently, the individual who thus increases his bulk and weight by taking just enough of the weaker alcoholic drinks daily to retard the processes of secretion and waste, in the same proportion diminishes his activity, his power of endurance, and his ability to resist the effects of morbid agents of every kind. This is abundantly illustrated by the thousands of beer and wine drinkers, who from twenty to twenty-five years of age, were muscular, active, capable of any reasonable endurance, with a weight of 150 pounds, but who, after moderately retarding atomic changes and retaining old atoms by the daily use of wine or beer, have acquired a weight of 200 pounds or more, and have lost their muscular activity and endurance to such an extent that an active exercise of twenty minutes would make them puff like a "heavy horse." It is this sedative effect of alcohol on the organic or molecular changes in the tissues, retaining waste and effete matter that ought to have been promptly disintegrated and thrown out, which impairs the vital properties, and predisposes or prepares the system to yield to morbid influences of any kind to which it may be exposed. And especially does this sedative effect of alcohol on the organic changes, when maintained by a moderate and continued use of the article, favor those degenerative changes, which result in tubercular, caseous, and fatty deposits in the lungs, liver, kidneys, heart, and arteries of the brain, and in materially shortening the duration of life. It is the same interference with the processes of nutrition and waste, only exerted more actively, that causes gastritis and delirium tremens in the excessive drinker of distilled spirits. If you ask for the special modus operandi of alcohol, how it produces its anæsthetic and sedative effect when taken into the human system, I answer, chiefly by its strong affinity for water and albumen. The two last named substances exist in the

blood and all the tissues of the body, and for them alcohol has a strong chemical affinity. Hence, when it is present in the blood, it attracts the water from the blood corpuscles, causing them to become more or less corrugated, and inclined to adhere to one another as described by Dr. Richardson, of London, and diminishing the capacity of the blood to absorb oxygen or other gases from the air in the lungs; and by its strong affinity for the albumen of the tissues, it retards the play of vital affinity between that substance and the other materials with which it is in contact, thereby retarding the molecular changes as already described. The paralyzing effect exerted on the vasomotor as well as cerebro-spinal nervous structures by which sensibility is impaired, is owing partly to the direct anæsthetic properties of the alcohol, and partly to the diminished interchange of oxygen for carbonic acid gas in the process of respiration. That a part of the alcohol should be retained for a considerable length of time in the system by the affinities just mentioned, is very probable. Hence the late Dr. Anstie may have been correct in claiming that it was not all eliminated from the system within any limited period of time, and yet its retention would afford no proof that it was either appropriated as food or for the generation of force.

On the contrary, the catalytic influence of its presence retards both. If we scan the whole domain of physiology and pathology in connection with the logical deductions from the experimental researches by parties widely separated by time, space, nationality, and language, we shall be forced to the conclusion that alcohol as found in any or all of the fermented and distilled drinks, is neither stimulating, strengthening, nor nourishing to the human system, but simply anæsthetic and sedative. Consequently, it cannot be used in health without injurious effects proportioned to the quantity used and the frequency of its repetition. Its applicability as a remedy in the treatment of disease is extremely limited; so much so that it might be wholly dispensed with, without any injury to the sick, every intelligent physician being able to supply its place with other remedies of equal, if not greater, value in the limited number of cases in which it is applicable. Such we regard as the just and legitimate verdict of true science, regarding the effects of alcoholic drinks on man. We might amplify this paper by the citation of additional authorities and illustrative facts, until it would fill a volume; but we have thought it more profitable and better fitting the present occasion, to limit it to a concise and plain statement of the present state of knowledge on this important subject.

DR. WILLIAM H. MIXON records (*American Practitioner*) a case in which, having no other instrument at hand, he tapped the bladder above the pubes with a bistoury. The patient made a good recovery.

DR. GEORGE H. BIXBY, of Boston, Mass., respectfully solicits from those members of the profession who have performed ovariotomy, their experience in regard to pregnancy occurring after that operation.

Translations.

CLINICAL THERMOMETRY.

FROM THE "COMPENDIUM DER NEUEREN MEDICINISCHEN WISSENSCHAFTEN," BY DR. B. KRAUS.

Condensed and translated by Dr. H. Gradle.

IN small-pox, either variola vera or a complication must be diagnosed, if the temperature remains febrile after the appearance of the eruption. In idiopathic croupous and lobar pneumonia the observation of a normal temperature at a certain time is not absolute evidence of the completion of the morbid process. A *very* high rise of the mercury denotes a great intensity or extension of the inflammation. Facial erysipelas threatens to extend further, and complications are to be feared as long as the temperature remains febrile in that affection. In bronchitis and influenza, a *highly* febrile condition shows involvement of the capillary bronchial tubes, or commencement of a pneumonitis; it occurs also in caseous degeneration of the exudation. Pertussis is always complicated when the temperature is abnormal. In acute rheumatism the height of the mercury is an index of the danger and probability of complications.

In meningeal and cerebral disorders the thermometer is of less diagnostic value. Wunderlich thinks that involvement of the convexity of the hemispheres is accompanied by a higher temperature than basilar meningitis, in which latter the normal heat may not be exceeded. As is well known, the pulse indicates by its acceleration an irritated condition of the brain; by its slackening a compression of the same, but the exact seat of the disorder is not thus revealed. The same seems to be the case with the thermometric evidence.

Inflammations of serous membranes increase in danger according to the height of the temperature, yet a moderate fever does not always warrant a favorable prognosis.

Repeated observation of a high temperature, with the co-existence of gastro-intestinal catarrh, indicates the occurrence of severe disease, as typhoid, etc.

Wunderlich doubts the existence of intermittent fever, if at the beginning of the hot stage the mercury reaches the vicinity of 41° C. (106° F.) or exceeds 41.8° C. (107.25° F.); but if the apyrexia is imperfect, the disease is again questionable. If, after the attacks have ceased, the temperature undergoes still abnormal exacerbations, the disease is not cured. In severe cases of this disease, especially in feeble and irritable individuals, the decline of the temperature towards the close may fall much below the normal limits, and be accompanied—or not—by other symptoms of collapse, without, however, indicating danger, if this collapse corresponds to the period of defervescence.

TEMPERATURE DURING CONVALESCENCE.

During convalescence the body may possess its normal degree of heat, but after the occurrence of severe, especially wasting, diseases, the temperature is usually below the normal degree; sometimes it is higher. Accordingly convalescence has been designated normal or irregular. A high temperature is generally owing to imperfect convalescence, while collapse, if considerable, is also not without danger, and points often to internal hæmorrhage, intestinal perforation, etc. Yet a temperature but slightly less than normal is not a dangerous sign, merely indicating that nutrition does not yet correspond to the demands of the system.

During convalescence the temperature possesses still an abnormal instability, hence a sudden febrile rise is not very rare. This may be due to errors in diet, too early partaking solid food, or spirits, or an excessive meal, or too great exertion from early rising, etc. Often a rise occurs immediately on leaving the bed. Constipation and other unimportant circumstances, are also of marked influence on the temperature. Yet the cause of the rise of temperature may also be a serious disorder, revealing itself at the time merely by that symptom, hence an unexpected result of a single thermometric observation should always receive due consideration.

TEMPERATURE AFTER DEATH.

After death the temperature shows some interesting alterations; in most cases it falls the more rapidly the lower the animal heat at the moment of death. Alvarenga details the thermometric course in the case of a man aged 58 years, who entered the clinic with cerebral apoplexy, and died of the same after the lapse of fourteen hours. The thermometer showed, one hour before death, 36.5° C., and one quarter of an hour after death, 35.6° C. Hereupon, retaining the instrument in the axilla, the following numbers were read off, record being taken every *fifteen minutes:* 35.6, 35.4, 35.0, 34.6, 34.0, 33.4, 32.8, 32.2, 31.6, 31.0, 30.6, 30.0, 29.6, 29.0, 28.4, 27.0, 25.6, 23.8, 20.6, 18.0, 15.8, 15, stationary.

Occasionally the temperature rises *post-mortem*, surpassing even the maximum during life. Jaccoud (*Traite de la path. interne*, T. 1) mentions that when a slight rise occurs, of but a few tenths degree, it takes place about an hour after death, whereupon, after the temperature has remained stationary for a short time, it begins to fall, at first slowly and thereupon more rapidly; if, however, the *post-mortem* rise has been considerable, the decline is much slower to occur, as in tetanus, cholera, and other febrile disorders, attended with an increase up to the last moment. The cause of the rise of temperature has been sought in (1) the suspension of respiration and cutaneous secretion, sources of loss of heat; (2) the uninterrupted continuance of the chemical processes, the means of production of heat, and (3) the *post-mortem* changes in muscular tissue, considered also a source of heat.

THE COURSE OF PATHOLOGICAL TEMPERATURE.

The normal diurnal oscillations of temperature become vastly more considerable in disease, so as to amount usually to 1–1½°C., and even 5–6° difference between the daily minimal and maximal temperature. The extent of

the diurnal oscillations depends on the nature, intensity, and stage of the disease, the complications and accidents, the favorable or fatal tendency of the affection, as well as on individual circumstances and therapeutic measures. The particular thermometric course of a disease is often sufficiently distinct to serve as means of diagnosis of that disorder.

The temperature either remains abnormally elevated *constantly*, until the acme is passed, giving the type of a continuous fever, or it returns at periods to its normal height, to describe thereafter a similar curve—intermittent fevers. In the latter class, each period of pyrexia can be considered as a special course of fever, a repetition of which is to be expected until the disease is cured.

The thermometric course of a disease consists of different stages characterized by a special thermometric curve of their own, sometimes abruptly, more often gradually, passing into each other. The *pyrogenetic* or initial stage, differs according to whether the fever is dependent on a local disease or not, and whether it precedes or follows the latter. In the former case the fever begins abruptly and reaches a high grade before the local disturbances are manifest; in such cases the initial stage is said to be completed, when the lowest mean temperature of the day characteristic of that disease is attained, or when the local symptoms begin to appear. In fevers without localization the first stage is not distinct, and the limits between it and the second are arbitrary.

The variations of disease, as regards their initial stage, are classified by Wunderlich under three heads: *a.* Diseases with short pyrogenetic stage, the temperature describing an almost straight, oblique line. *b.* Affections with initial stage of several days' duration, the temperature usually rising in the evening and sinking again in the morning, at which time it may be even normal. Occasionally this stage is interrupted by continuous apyrexia. *c.* Diseases with still more gradual development, generally irregular and not distinctly typical in their course.

Differences in temperature during the height of disease, the second stage, may occur as regards the absolute maximum, dependent on the nature and intensity of the affection, but too much weight ought not to be placed on this, unless of such a height as to threaten life by itself, since a temporary high temperature may result from various extraneous influences. Of more importance are the differences in the diurnal average during the acme, the mean of which for the entire period is still more characteristic. But the most valuable basis for decision in any case is the entire thermometric course during the acme. This may be ascending to a point at which either death occurs, or a rapid decline commences, or it may remain stationary at a certain height, undergoing merely slight diurnal oscillations of about $\frac{1}{2}^{\circ}$, or finally be irregular. This second stage may terminate abruptly, or gradually pass into another period. It is often followed, especially in favorable cases passing through a severe course, by a period of unsteadiness of temperature.

The thermometric course during the process of repair is divided by Wunderlich into the following periods: *a.* The stage of decided but insufficient decline; *b.* defervescence;

c. the period following defervescence, and *d*, convalescence. The stage of decline is not present in all cases; occasionally it commences with a short precursory *rise* of temperature. The period of defervescence is the most distinct stage in different diseases, and deviations from its typical course are good evidence of anomalies or imperfect repair. The course of defervescence constitutes either *crisis*, in which the temperature falls 2–5° C., or more, within thirty-six hours at the latest, reaching the normal height, or even sinking beyond it; or it is termed *lysis* when the decline is much more gradual. In this mode of defervescence the temperature shows a greater decline from evening to the next morning than from the latter period to the consecutive evening, during which time it may remain stationary or even rise slightly. In this way the period may be protracted two to four days, or even one week, as we see in scarlatina, in typhus, occasionally in pneumonitis of long duration; rarely does this occur in typhoid fever, oftener in catarrhal fevers. The course of lysis may also be remittent, considerable morning remissions alternating with high evening exacerbations while on the whole the daily average and maximum steadily decreases.

A consecutive disease begins to show its influence on the temperature after the latter has passed through the usual course to convalescence, provided it is of a febrile nature.

The fatal issue is preceded by thermometric phenomena, which, in some cases might be interpreted as apparent improvement; in others, however, as of decided unfavorable prognostic evidence; and but rarely do we succeed in such cases in avoiding the fatal issue by powerful interference. This stage, preceding the moribund state, differs in its thermometric course from both the ordinary course of the disease and the true agony. According to Wunderlich, the following varieties of this stage may occur:

a. The ascending form, in which, with the exception, perhaps, of slight morning remissions, the temperature rises steadily until the occurrence of agony or death itself. Its beginning is more or less distinct, according to the height of the fever existing previously.

b. The descending form, much more frequent, in which the decline of temperature might be taken as a favorable sign if it were not for the concomitant symptoms, especially the enormous rise in the frequency of the pulse. This stage is mostly of short duration, from one-half to two days, the temperature sinking only about 1° C., though sometimes reaching the normal height. Not unfrequently the temperature begins to rise again in the following stage of agony.

c. In some cases this stage is indicated only by other symptoms, for instance, the pulse, and not at all by any thermometric change, especially when cyanosis is present, though, in the latter case, the descending form is the more common.

d. The last variety is characterized by great oscillations of temperature, high exacerbations alternating with very low remissions, as is the case in pyæmic disorder, and desperate affections which have been treated very energetically.

[*To be continued.*]

Editorial Department.

THE STUDY OF ÆTIOLOGY.

TO facilitate the study of ætiology, more especially in relation to acute endemic and epidemic diseases, we need much more exact knowledge in regard to the date of *commencement* of all cases occurring in a given number of places through a series of years.

Our mortuary statistics, showing the time and number of deaths in a given locality, do not supply the facts we need, for the well-known reason that death does not generally occur until several days and often weeks have elapsed after the disease began. Hence atmospheric conditions, that may have been potent in the production of an attack, may have ceased or become materially changed before the date of death. It is well known that systematic and detailed records of all important atmospheric conditions are now kept in localities representing all sections of our country, under the direction of the Signal Service Bureau of the General Government. And measures are being taken to render these records still more complete by adding observations on the electric and ozonic conditions of the atmosphere. If we could now secure the co-operation of a number of physicians engaged in active practice at their Signal Service Stations who would make it a duty to ascertain as exactly as possible the date of the first active symptoms of all acute cases of disease coming under their observation, entering the same in their pocket memorandums daily, and at the end of each month tabulate them on a sheet of paper properly ruled for that purpose, we would soon be able to determine whether there was any coincidence between certain atmospheric conditions and the development of certain diseases, by comparing the tables of sickness with those embodying the meteorological records in the same locality.

Initiatory steps were taken for securing such records by the Section on Practical Medicine of the American Medical Association at the meeting in Detroit, in 1874. The subject was further presented in a report to the same Section of the Association this year in Louisville, and a committee appointed to prosecute the work. We hope such practitioners as may be applied to for co-operation with the committee will cordially render their aid, and that each one will take all the necessary care to ascertain by careful inquiry as near the exact date of the initial symptoms in each case as is possible. The committee consists of Drs. N. S. Davis, and H. A. Johnson, of Chicago, and J. B. Johnson, of St. Louis.

ÆSCULAPIAN SOCIETY OF THE WABASH VALLEY.—This Society held a regular and interesting meeting in Terre Haute, Indiana, on the 26th and 27th ults.

PRIZE ESSAY—MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.—At the Annual Session of this Association, held at Montgomery during the second week in April, 1875, Dr. S. D. Seelye, of Montgomery, after some remarks regarding the increasing frequency with which cases of Bright's Disease are brought under medical care in this section, the unsatisfactory though extensive literature of the subject, and the generally fatal prognosis which we are obliged to give, rendering it one of the opprobria of the profession; and believing that there is still some hidden light that may be made to illumine the subject if attention and inquiry are turned especially to it, proposed to place in the hands of this Association a prize of one hundred dollars for the best treatise on this disease. The proposition having been accepted by this Association, it now invites from the thinkers and investigators of the profession at large, the generous competition which its author invokes.

BENJ. H. RIGGS, M.D.,
Sec. M. A. S. A., Selma, Ala.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.—A centennial number. The *Boston Medical and Surgical Journal* for June 17th, will be largely devoted to historical matters of special professional interest. Among the attractive features will be the following: 1, A copper-plate portrait of Gen. Joseph Warren, M.D., with quotations from his medical day book; 2, An original Sonnet by Dr. Oliver Wendell Holmes; 3, A Paper by Dr. George B. Loring, on the Medical Profession of Massachusetts at the time of the Revolution; 4, A Paper by Dr. J. M. Toner, of Washington, D. C., on the Medical Department of the Continental Army; 5, A Translation of a Hessian Surgeon's Notes of some of his American experiences; 6, Reminiscences of a Tory Surgeon's Part in the Battle of Bunker Hill; 7, A Letter from Charleston, S. C., upon Historical Subjects. Price 15 cents. H. O. Houghton and Company.

AMERICAN MEDICAL ASSOCIATION.—By request of many members, the Secretary will shortly issue a pamphlet edition of the MINUTES of the late session. All who desire copies, will please remit *fifty cents* at once, to

WM. B. ATKINSON,
Perm't Sec'y,
1,400 Pine Street, Phila.

HEALTH OF DENVER.—Dr. F. G. Bancroft, city physician of Denver, Colorado, claims, in his annual report, the exceptionally favorable death-rate of 13 in 1,000 for that city. Of consumption he says:

I must say of the large number of consumptives who come to Colorado in all of the different varieties and stages of the disease, with the hope of an immediate and permanent cure, that the greater portion eventually die; yet I am fully of the opinion that the climate of Colorado gives to the invalid in the early stages better chances of either a complete restoration to health or a prolonged and happy life, than any other portion of the Union. Even in hopeless cases, our clear, dry, exhilarating air gives buoyancy to the spirits, that carries the patient to his final hour with less physical and mental suffering than could occur in damp and gloomy climates.—*Phil. Med. Rep.*

Correspondence.

A LETTER FROM PARIS.

EDITORS MEDICAL EXAMINER: As the result of the last concours of agregation in medicine, MM. Dieulafoy, Grancher, Lionville, Lepine, and Legroux have become agreges of the Faculty of Paris, and MM. Grasset and Balestre of the Faculty of Montpellier. The term agrege conveys the meaning of "fellow," or, as used with us, might, perhaps, be better translated as assistant professor. From the agreges are elected the professors, as vacancies occur in the Faculty.

The road to this position is by no means an easy one to travel, and this system of competitive examinations is one that the profession in France is justly proud of. The concours is open to any graduate of the French school who has reached the age of twenty-five years. For the nine vacancies of this last concours there were twenty candidates.

The first trial was an essay upon Anatomy and General Physiology, and the subject given was "On the Lymphatic System." This had to be treated without notes or aid of books for reference, and each candidate read his essay before the committee of the Faculty, in the large amphitheatre of the school, which of course was open to the public.

The second examination consisted in a lecture of three-quarters of an hour on some given medical question, three hours being granted for preparation, but without aid of books or notes. The jury then having examined the printed works of each candidate, the opening trial was finished and two of the competitors were eliminated.

Then commenced the final trials (*epreuves definatives*). The first was a public lecture of an hour, on a subject of general pathology given by the jury twenty-four hours previously. The second consisted in a public clinical lecture on some case, designated by the jury, in the hospital wards (Hotel Dieu or Pitie), after fifteen minutes' examination by the candidate. The third and last trial was the writing of a thesis (subject given by the jury), which had to be *printed* in regulation form seventeen days after the subject was announced.

From this summary of the requirements of the concours of agregation, it will be seen that it is no easy matter to acquire the title of agrege, and that there is no "royal" road to that position. Although the concours was opened in December, the theses were not finished until April. As all the examinations were public, they were followed very closely, not only by the students but by the graduates of the school, for there is always an interest felt in these contests by the profession at large, and there are few things connected with the school in which the French take more pride than in these struggles for position. There is

no chance for favoritism in the examinations, as their publicity forbids any underhand work. One curious part of the concours is the "quizzing" of one candidate by the others. It is upon the thesis. The candidate seats himself in the "pulpit" of the large amphitheatre, thesis in hand; while, seated at a table in front of him, are the members of the jury, attired in their red silk gowns and hats, and two of the competitors, likewise supplied with copies of the thesis. The latter successively ply the "man in the pulpit" with questions on the subject of his thesis, trying to break down any theory that he may have advanced, or to catch him upon some point that he may not have considered. The one who questions is incited, perhaps, by the thought that he soon will undergo the same process, or, indeed, he may be smarting under the remembrance of questions that were given to embarrass him in the presence of eight or nine hundred auditors. With that characteristic French style, the questioner generally commences with a few remarks upon the pleasure he has had in reading the essay before him, and congratulates the author upon its merit, and then he suddenly launches out upon some hidden question that does not always betray the amount of good feeling one would expect after his prorogation. The author of the thesis commences his reply by thanking the other for his congratulations, perhaps expressing himself as highly honored by such a compliment from so distinguished a confrere, and then replies to the questions asked, referring, it may be, to another page of his thesis where the answer may be found, or, perhaps, giving some new references to prove his position. Thus it goes on, and the jury and public sit and listen, generally amused at the contest that is going on before them. One can judge that under these circumstances a man's ability has a clear chance of making itself evident, although there is in such trials, perhaps, a tendency to the cultivation of egotism, which may in some measure account for peculiarities of to-day.

The report of M. Chauffard, president of the jury, to the Minister of Public Instruction, mentions this concours as the most satisfactory that has been held for many years, and pays high compliments to those who were not elected as well as to the successful ones. The subjects for the theses are chosen by the Faculty with reference to those questions that are considered as needing more research, and we find the pathology of the nervous system occupying a prominent position among the subjects given. Five subjects were on questions of special and general therapeutics. This last choice was not amiss, for therapeutics are not too closely investigated here. Even the writer in the half-official *Gazette des Hopitaux* admits this, for in this connection we find the following rather pointed inquiry: "Does the Faculty commence to understand that therapeutics is the feeble side of its teaching, and that, without losing anything for the future in its useful instruction on pathological anatomy and pathogeny, it is time to direct its studies a little toward that which is the object and goal of all medical researches?" This is rather a broad hint, but unfortunately embodies too much truth in indicating a very weak point in French medical training. To forget the patient in studying his disease

is, to speak mildly, rather an awkward thing for the patient.

Dr. Siredey has published an article in the March and April numbers of the *Annales de Gynecologie*, which is entitled: "Puerperal Fever does not Exist." He holds that under the name of puerperal fever are confounded many different diseases, each having a proper train of symptoms, a special course, and a variable prognosis, and that among them it is possible to make a differential diagnosis. The numerous and varied opinions that are held upon this question he ascribes to the variety of lesions that have been found upon *post-mortem* examination. For some persons the metritis embodies the principal lesion, while for others a peritonitis, phlebitis, or lymphangitis has the preference. The essentialists object that the disease cannot be named from any of the lesions, as these vary with the case, with the epidemic, or indeed may be altogether wanting. Dr. Siredey contests this last view that there may be no lesion, and holds that the autopsies were not made with sufficient care, and are too few to be of value. In support of this opinion he mentions several cases in which, though at first nothing abnormal was found, a more careful examination demonstrated the presence of pus. From the vast number of cases examined where lesions were found, and from the few and doubtful records to the contrary, he deems it just to admit that the fever is not essential. Nevertheless, the name "puerperal fever" is preserved, and the various lesions in different parts of the body are considered as only secondary manifestations of this one disease. It matters little whether the action turns itself upon the uterus, the peritoneum, the veins, or the lymphatics; for the upholders of this idea, it is sufficient to know the ætiological conditions of the disease to be sure of its nature. So constituted, puerperal fever has been accepted by the most eminent. Depaul, P. Dubois, and Danyau, in the discussion of 1858, defended it. Trousseau, at first doubting, finally admitted it, not only in women, but in infants, and, indeed, in wounded men, provided they were placed near an obstetrical service! In spite of his respect for such eminent authorities, Dr. Siredey believes that in retaining the name "puerperal fever" we only perpetuate an error, and obscure a question that it is of the highest importance to clear up. In fevers we find certain lesions that are constant. For example, in typhoid fever there is the ulceration of Peyer's patches, in scarlet fever the serous membranes are attacked, and the mucous in measles. For the different lesions that are found after death from the disease called puerperal fever, Dr. Siredey thinks he is able to point out a series of symptoms that will show that several distinct diseases have been confounded heretofore, and that a differential diagnosis can be made among them. After mentioning the peritonitis, with its typhoid state and fetid diarrhœa and lochia, he treats of the really difficult, and for many impossible, diagnosis between phlebitis and lymphangitis. He commences by endeavoring to show that many times the lesions considered to be in the veins were in the lymphatics of the uterus. The principal trunks of the lymphatics occupy the angles and sides of the uterus, and sometimes they acquire a volume of 5, 6,

or 8 millimetres, equaling that of the veins, and hence liable to be confounded with them. The large circular vessel, situated at the juncture of the neck and body of the uterus, which is so often found filled with pus, is not a vein, but a lymphatic. Dr. Siredey thinks that many mistakes have been made from these anatomical peculiarities, and considers that inflammation of the lymphatics is the more common. Noting the very intimate connection of the lymphatics with the peritoneum, and the frequent occurrence of peritonitis in the fever of child-bed, he argues that the so-called puerperal fever is generally but a lymphangitis. The differential diagnosis between this disease and phlebitis he places as follows: Chill—In the lymphangitis it is unique, and only appears at the commencement of the disease, while in phlebitis it is multiple, and not only is found at the beginning but at all periods of the disease. The chill of the lymphangitis appears in general from the first to the fifth day after the labor, while in an inflammation of the veins it occurs but rarely before the sixth day, and frequently much later. The temperature reaches a high figure (40° to 41° C.) in the lymphangitis, but remains at this level, varying only by some tenths of a degree. In the phlebitis the temperature rises progressively, reaching its maximum during the febrile paroxysm; then falls to rise again, presenting between the remissions and exacerbations a difference of several degrees. The pain is more intense in the abdomen for the lymphangitis, which may be accounted for by the peritonitis. The phlebitis does not give rise to intense abdominal symptoms, but reveals its existence by varied lesions that testify to the invasion of the economy by pyæmia. The course of disease is much more rapid in the lymphangitis. Death occurs generally eight or ten days after the labor, and in rare cases, in two or three days, while the phlebitis may extend from two to three weeks. Dr. Siredey admits that lesions of both diseases are found in some cases, but states that the symptoms show the first period belongs to the lymphangitis, while the second period is that of phlebitis. He illustrates his argument by giving in detail the history of four cases.

During the past two weeks the Paris journals, medical and secular, have been very much occupied with the voyage of the balloon Zenith. Messrs. Croce-Spinelli, Sivel and Tissandier made the ascent on the 15th of April, and gained the height of 8,600 metres, but unfortunately the two former died during their exposure in this rarefied atmosphere, and Tissandier alone remained to tell of their experience. The ballon was equipped with all the inventions that science has shown to be of use in such voyages, and each person was provided with a bag of oxygen by means of which he could supply himself with that gas when the quantity in the air should become too limited. However, these precautions seem to have been of but little service. Tissandier states that at twenty minutes after one o'clock (two hours after they left the earth) he saw the needle of the barometer pass 280 millimetres, and he tried to say "We are at 8,000 metres," but was unable to speak. The balloon then descended a short distance, but soon mounted again, and all three lost consciousness. When Tissandier came to himself, he found

the balloon falling with frightful velocity and his two companions dead. Self-registering tubes had been placed in the balloon to note the atmospheric pressure, and, though the majority of them were broken, two indicated that the maximum height reached must have been 8,600 metres. The question that greatly interests the scientific world is concerning the cause of the death of Croce-Spinelli and Sivel. Experiments have frequently been made in Paris by means of an air-tight chamber, in which the pressure of the atmosphere can be reduced as desired. Under these conditions, M. Bert has been able, by inhaling oxygen, to support a diminution corresponding to an ascent of 8,900 metres. But unfortunately the conditions of the experiment and of an ascent have not been placed on exactly the same level. The subject is at present under consideration at the Academy of Medicine, but the opinion, as found in the medical journals, seems to be that the death was the result of an asphyxia from privation of oxygen, with the added influence of excessive cold; and, secondary to this, to pulmonary lesions such as accompany the asphyxia from carbonic acid. It is thought that the voyagers were not sufficiently careful in supplying themselves with the oxygen, or that the rapidity of the ascent prevented them from using the gas. One result of this balloon trip is an outcry against researches in such high regions, and the Academy finds itself called upon to discourage any future attempts by not offering inducements for the venture. Of course the wide-spread interest in this fatal attempt has incited all those with a "ballooning" turn of mind, and already we hear of new ascents that are to take place.

It is generally admitted that Paris leads the world for fashion, and I doubt not there is a great deal of truth in such an assertion. More particularly was I convinced of this when I heard the following *fashionable* indication for the early use of the forceps: When a public singer is brought to the pangs of child-bed, one must use the forceps as soon as possible, lest the continued screaming of the woman should injure her voice. C. C. M.

PARIS, May 3d, 1875.

CHLORAL IN TETANUS. — In the treatment of traumatic tetanus by chloral, Dr. Gontier reaches the following conclusions: Chloral may render great service in the treatment of chronic or subacute tetanus, and is especially preferable to other drugs. It is completely inefficacious in acute tetanus, and only has a slight palliative action. It may be advantageously associated with tonics, diffusible stimulants, and diaphoretics. Intravenous injections of chloral are extremely dangerous, and should, in the present state of science, be reserved for exceptional cases only. — *Phil. Med. Reporter.*

THE DURATION OF LIFE.—The following facts on the duration of life appear in the *Deutsche Versicherungs Zeitung:*

"In ancient Rome, during the period between the years 200 and 300 A. D., the average duration of life among the upper classes was 30 years. In the present century, among the same classes of people, it amounts to 50 years. In the sixteenth century the mean duration of life in Geneva was 21.21 years; between 1814 and 1833 it was 40.68 years; and at the present time as many people live to 70 years of age as 300 years ago lived to the age of 43."—*Ibid.*

Gleanings from Our Exchanges.

A CASE OF UNILATERAL SWEATING OF THE HEAD.

By ALONZO BRYAN, M.D.

From the Clinic, June 5, 1875.

AS every phenomenon that may perchance be of value in the investigation of the nervous system, is at present of great importance, I am glad to present for publication the account of a case of unilateral sweating of the head, having had the case for some time under observation. Only a few such cases have been observed, and it appears not with the care which their rareness would seem to demand. Dr. Bartholow, I believe, has reported several instances of the affection to the New York Neurological Society.

June 27, 1874.—Mrs. M. J. C. has unilateral sweating of the head. To-day I saw her when the temperature of the room was 92° Fah. The parts of the head and face to the right of the median line were sweating freely. The parts to the left were ordinarily moist, as is the skin during a state of common insensible perspiration. The temperature of the right and left temples differed to the extent of 1¼° Fah. under the following circumstances: A good medical thermometer was pressed upon the left temple a little back of the external angle of the eye (by applying over the bulb of the instrument, for the purpose of excluding the atmosphere, very thick folds of woollen flannel) and the temperature was found to be 98½° F. At the corresponding spot on the opposite or sweating side, the temperature was 97¼°. When the bulb was not covered in by flannel, in the still atmosphere, the relative difference of temperature was the same. The temperature at the bend of each elbow, with the arm flexed so as to cover in the bulb of the thermometer, was on each side alike, 99½° (the person had been taking active exercise). Within the mouth, on both sides, the temperature was uniform, exactly 100°. The touch, sensibility, and motility, were uniform and perfect. The two radial pulses were alike; when the patient was sitting against the back of a common chair, 88 pulsations in the minute. The sudoriferous glands only, were more active on the one side. The sweating extended very slightly to the left of the median line of the mouth and chin, but the median line of the forehead and nose was an exact line of demarcation. The difference of sweating did not extend below the head and face.

Only two pathological states could be ascertained to exist: unilateral neuralgia of the face and head, and psoriasis; the latter occurring in spots on the head and extremities. Contrary to what I had expected, the neuralgia was on the right side; *i. e.*, the sweating side. This latter point, to my surprise, I recently ascertained. I presume that in this case the functions of the affected sympathetic filaments are rather exalted instead of being depressed. It should be observed though that the transudation of perspiration seemed to be held in abeyance on the side unaffected with neuralgia. On the neuralgic side the degree of perspiration seemed to be that which ought normally to have been excited by the temperature to which the person was subject at the time of the examination.

The psoriasis may have been due to nervous influence also.

It may be observed in this case that only one vital action seemed to

be interfered with: the transudation of perspiration. Touch, sensibility, and motility, were uniform and perfect upon the two sides. The special senses were perfect. The chemical and organic changes in the tissues did not seem to be retarded or hastened, as the temperature within the mouth was the same on either side, 100°. The difference of temperature of the two sides, externally, was doubtless owing to the difference of the cutaneous evaporation.

A NOVEL TREATMENT OF OBSTINATE VOMITING IN PREGNANCY.

By Edward Copeman, M.D., F. R. C. P.

From the British Medical Journal, May 15, 1875.

DURING a long professional life, I have had much experience of this troublesome affection, and amongst medicines have found calumba and oxalate of cerium the most beneficial; but these and all other medicines often fail, and the treatment suggested by the following cases, discovered by accident as it were, and never, as far as I know (although nothing is new under the sun), employed before, promises some chance of our being able with more certainty to overcome this very threatening concomitant of pregnancy.

On June 9th, 1874, I was summoned to a lady, thirty-five years of age or thereabouts, to consult with two other practitioners already in attendance. She was about six months gone in pregnancy, and was so reduced by almost incessant vomiting, that great fears were entertained as to her safety. I noticed there was slight uterine action accompanying the sickness, and on examination, I found the os uteri partially dilated so as readily to admit the finger. I thought it right under the emergency to advise bringing on labor without delay; the gentlemen present, however, expressed no little apprehension as to whether or not she would have strength to undergo the effort of parturition on account of the very depressed and exhausted state of her system. They nevertheless concurred in the advisability of the course I recommended, and asked me to perform the operation. I at once dilated the os uteri as much as I could with the finger, and could feel the membranes and the head of the child. I tried to rupture the membranes with a teloscopic female catheter (the only instrument at hand), but they were so flaccid and the head offered so little resistance, the catheter shortening itself also on my making pressure, that I could not succeed; and, thinking it wise to wait awhile before resorting to any other expedient, we retired to another room for further consultation. In about one hour, we saw the patient again, and were surprised to find that a longer period had elapsed without sickness than before; and we again waited, in the hope that she might be able to take a little nourishment, and so be better prepared to undergo any further proceeding. We waited another hour, and another, but there was no return of vomiting; and we spent the rest of the night in watching, during the whole of which time she was improving, and we determined to let well alone. I left her early in the morning, and had a favorable account of her a few days afterwards. There was no return of sickness; she went on to the full period of pregnancy, was then delivered of a healthy child, and made a good recovery.

Two other cases are given, where a similar manipulation resulted in prompt and entire relief.

Book Reviews.

REST IN NERVOUS DISEASE — ITS USE AND ABUSE. By S. Weir Mitchell, M.D. 20 pp. Price, 30c.

This is No. 4 of the series of American Clinical Lectures now being issued in monthly parts by G. P. Putnam's Sons.

A few extracts will show the tenor of the essay:

"Rest and unrest," the author says, "have had their days and fashions in medicine; but be you sure that he who can tell when the one is wanted, and when the other, is a man who is a master in the ways of healing. Surgeons and doctors for a long while have been using rest as one means of curing disease. Not by any means all of them have distinct views as to what it is they do when they put at rest a limb or the whole body; and yet this is what we most want to know. Unhappily, we lack as yet some of the factors needed to work out this hard equation; and until these are given we must in part only guess at the physiological results of rest, for to-day no man can tell me fully what is the difference in the products of the life of a limb at positive rest and in active motion. In fact, most that we know on this matter is purely empirical, and is in the shape of coarse clinical results. Still, even these teach certain things which you will do well to bear in mind. First of all is the thought, which should be ever with us, that few medical means are without their evil side. In our efforts to help, we too often harm, and we must take prudent care always that in causing the largest share of good we give rise to the least amount of ill. The one goes with the other as surely as shadow with light. To no medical measure does this caution more apply than to the use of rest.

"When you put patients in bed, and forbid them to rise or to make use of their muscles, you at once lessen appetite, weaken, in many cases, digestion, constipate the bowels, and enfeeble circulation. To say how all this arises, would need not a lecture, but a book, and I can only hint at what I might call headings for thought. Defect of circulation is the main business to think about. A man in bed has his heart-beats brought down in number and also in force. Then there is for him no longer the constant momentary pumping out of blood from active muscles, and these aids to the heart failing, the distant local circulations suffer, and the blood flows around the muscles and not through them, and the skin ceases to be flushed by exercise and becomes pale and shrunken. To be small one moment and large the next is a condition of health for the vessels, and this fails for the want of exercise, so that when a man lies in bed the muscles lose tone, and when he gets up of a sudden this is seen in the way the blood column enlarges the lower vessels, and, leaving the head, causes faintness. Of these well-known facts I remind you only that you may the more fully see why I dwell so much on the means which must be used with rest in order to take from its avoidable evils.

"Think, then, when you put a person in bed that you are lessening the heart-beats some twenty a minute, nearly a third; that you are making the tardy blood to linger in the by-ways of the blood-round, for it has its by-ways; that rest prone, binds the bowels, and tends to destroy the desire to eat; and that muscles in rest too long get to be unhealthy and shrunken in substance. Bear these ills in mind, and be ready to meet them, and you will have answered the hard question of how to help by rest without hurt to the patient.

"But what is it that rest does for your sick man? We have seen, in brief, how it hurts; how does it help? When first I came to ask myself this question, I found that though in many cases I was sure of its usefulness, I was by no means sure why it gave rise to such helpful results; nor am I now much better off in this matter, as concerns some of the diseases in which I am most secure of aid from it."

Rest in neuralgias is first considered, and a variety of cases given.

"I once treated a case of infra-maxillary neural pain by rest. I forbade laughing and talking, and gave only fluid food. These means made less the number of fits of pain, which were usually about fifty a day. On the first day of rest they became thirty-three, and in four days came down to eleven, but these were very bad, as if with lessening the number we had made greater the pain. I found in this case that rest only helped but did not cure, nor is it ever much more than an aid to other means. Could we have put a stop to swallowing, no doubt we should have done still better, for the more she swallowed the worse grew the pain. Motion of the part, then, increases nerve pain, and motion or active function of parts far from it may do the same. No one can yet say why this is as regards the fifth nerve. The motions we speak of do not all of them mechanically disturb the nerve. In many cases they cannot. No doubt there are close relations in the sensorium between the centres which get impressions of all kinds from face, and throat, and mouth, and stomach, and when one little centre becomes irritable from disease, or the steady acting of an outside cause of disorder, like a pinched nerve, it soon begins to feel morbidly, through other ganglia, the normal impressions which every functional act brings to them, and through them to it.

"Now this is not an explanation; it is only a way of stating the facts, but it is a way which perhaps may aid you to see them in a clearer light. Suppress, by rest, the number of normal excitations which reach the over-sensitive nerve cells, and you suppress some of the causes of pain, because an excitable centre feels all things as pain, and grows more and more sensitive, like a man in anger whose wrath is fed by everything.

"The use of these facts gets to be plainer in neuralgias of the limbs. Some of you will recall a case of neuralgia from a wound of the median nerve-branches in the hand, which you saw last year. The irritations lasted long, and were so constant that the whole of the sensory centres belonging to the arm got at last to be distressingly alive to outside impressions, so that the faint messages sent to the brain from the motions of distant muscles in the forearm and arm were all felt in the centres as pain.

"It has long been my practice to

insist that patients in the early stages of spinal congestion, meningitis, and chronic myelitis, especially in the very well localized forms the latter disease may assume, should lie down whenever they are indoors. If I can carry my point, I like very much to put these cases in bed, and at perfect rest for a few weeks, and my reasons for doing so are these: Erect posture, and walking heavily, tax the spinal ganglia, and never more so than when every step is labor. The prone position puts them at rest. It is easiest to repair when the machine is not in full action, and so rest is to be wished for in a disordered spine. Besides which I could tell you case on case of these troubles, in which some sudden fatigue has brought about an abrupt increase in the gravity of the disease, while I have never seen ill come of rest, even though it caused no gain.

"In cases of chronic meningitis, such as I have seen come of injury, or from the downward passage of cerebral meningitis, after sunstroke, rest, with counter-irritants, is almost the only very good means; rest, long and complete, is the one utmost want. Nor need I say much as to the treatment by pure rest of the meningo-myelitis of Pott's disease, in which you have all seen the most perfect success in this house from the use of the prone position without the classical treatment by the hot iron, which is certainly sometimes useful, but in many cases needless, despite Charcot's recent and most authoritative statement.

"I come last in my hasty review to a class of cases in which the use of rest is entirely my own idea, and in which I am sure I have gotten results of great value — results which happily you have seen with me in this very hospital. I allude to the use of rest in locomotor ataxia, in its early stages of pain chiefly and most surely, but also in any case of posterior sclerosis before it has gone too far. You will ask me what I mean by this phrase, "gone too far;" and I answer that it is vague, because I really am, as yet, unable to set the limit beyond which rest is useless. I have seen it strangely relieve old cases of ataxia in which there was pain, and with the relief of pain there was also unhoped-for relief of other symptoms.

"I have tried in this lecture to make clear my views as to the evil and the good of rest, but I have failed to satisfy myself if I have not set in strong light the fact that the ills which go with this useful means of treatment are capable of being met and dealt with to the good service of cases of disease. Rest can be made to help. Rest also can hurt, and he who deals with it as a means of cure must not fail to bear in mind the modes by which we can secure the light without the shadow, the good without the harm."

Analysis of One Thousand Cases of Skin Disease, with Cases and Remarks on Treatment. By L. Duncan Bulkley, A.M., M.D.

This is a reprint from the *American Practitioner* for May, 1875. It contains many valuable suggestions, especially in regard to treatment. We quote the following fragments from different parts of the essay:

"All the diseases noted are arranged under forty-three heads, and several of these again include a number of

different forms usually recognized as separate diseases; thus acne has six varieties; eczema includes much that might be called by some impetigo and lichen; tinea includes the tinea circinata and tonsurans, or ring-worm of the body and head; also favus, parasitic sycosis, and so on.

"Considerably more than one-half of all the patients were females—five hundred and seventy-four to four hundred and twenty-four males, an excess of one hundred and fifty or fifteen per cent. of females—and in two cases the sex was not stated. But little can be learned, however, from this, as the females are more at leisure to come during the dispensary hours, and many of the diseases are more annoying to this sex than to men. But a comparatively small proportion were children, except in the case of eczema, where about one-sixth of the entire number were five years of age or under. The number of cases is too small to draw any conclusions as to the season of the year in which various diseases are wont to appear, nor can any deductions be made as to the effect of occupation in producing disease, except in certain instances. It is, however, certain to my mind, that a very large share of cases are the direct result of filth, neglect of hygienic rules, and of poor and improper food. As an instance of the effect of filth, I would cite the one hundred and forty-one cases due to animal and vegetable parasites, one-seventh of the whole number analyzed; of the neglect of hygienic considerations, the ninety-eight cases of syphilitic eruptions, or one-tenth of the whole; and of dietary errors, the one hundred and seventy-seven cases of acne, erythema, and urticaria, or one-sixth of the whole; together with the direct effect of dietary errors in causing outbreaks of eczema, furuncles, pruritus, lichen, etc.

"The diseases are further commented upon in the order of their frequency, *eczema* coming first in the list, from its frequency as well as its very great importance; and in all the statistics published it has always outnumbered any other form of cutaneous disease many-fold (with the single exception, I believe, of McCall Anderson's hospital statistics,* where scabies equals eczema in frequency), the proportion being always about the same; namely, one-third of all cases.

"It appears from these statistics that the greatest predisposition to eczema is during the first year of life, when eighteen cases were observed; and during the first five years fifty-six cases, or more than one-sixth of the whole, occurred; the next five years, five to ten, giving but twenty, or a total of seventy-six for the first decade. Wilson's statistics give but twenty-nine for the first thousand and forty-one for the second during this first decade, showing that the lower station in life has much to do in rendering the very earlier years subject to eczema. Again, the thirty years from the ages of thirty to sixty gave with Wilson one hundred and sixty-two patients with eczema in each thousand against one hundred and sixteen in our statistics. Now this period between thirty and sixty we know to be that most liable to gouty trouble, and it is quite probable that the indolent and sedative life with over-indulgence of the rich has much to do in making eczema more com-

* *Diseases of the Skin—Analysis of Eleven Thousand Cases.* London, 1872.

mon during middle life in the higher walks of English society than among the lower classes in America.

"Quite a proportion of these cases were in the young, as before stated; eighteen of the patients occurring in the first year of life, fifty-six in all being five years or under. Eczema at this period requires very careful and judicious treatment. Each case almost will require a different course; and it is well to remember that it is the *patient* which is to be treated, and not the disease. I do not order poultices to remove the crusts of infantile eczema as many do, preferring much to cause their separation by means of fatty matter. Among the poor, and sometimes among the rich, I have the head soaked in cod-liver oil (sweet-almond oil answers), or I have an ointment applied at once in a tolerably soft form; directing that the head shall not be washed at all, but as fast as the crusts fall, perhaps with slight assistance from the finger-nail, the ointment is to be re-applied; the idea being to thoroughly protect the irritated mucous layer of the skin, and to shield it from air and water. Occasionally the crusts will accumulate and adhere, and it becomes necessary to use a poultice or wash the head well with warm water and borax; but this, in my experience, is very rare.

"During the past year, I have employed very largely, tannin in ointment (one drachm to one ounce) in eczema, and like it very well. A very common treatment is to bathe first with the *liquor picis alkalinus*, diluted ten or twelve times, twice a day, and apply the tannin ointment immediately afterward. I have also used with very satisfactory results the subnitrate of bismuth in ointment (half a drachm to one ounce), and prefer it in very many instances to that of zinc, as commonly employed. I would again mention the value of the rose ointment, as an excipient, and its efficiency when the simple ointment has failed. Several cases of eczema rubrum covering quite a large part of the body of children one or two years old were seen. These cases are often most obstinate. Our best results were attained by starch and alkaline baths, and powdering the surface with subnitrate of bismuth and starch.

"Internal treatment is always required, and I believe that the largest percentage of good results was obtained by means of cod-liver oil in appropriate doses. Syrup of the iodide of iron is also invaluable in treating eczema in children.

"In adults, most of the cases of eczema were of the chronic form, very many of them being in the legs, and dependent upon varicose veins. The treatment of these is very frequently unsatisfactory, because of the continued existence of the cause, especially among the poor, who cannot give the necessary time to rest. Elastic stockings should be insisted on in eczema of the legs when the disease has recurred often or lasted long; for, although the veins may not appear to be varicose, there is often a want of tone of the capillaries, which is supplied by the stockings. We have had good results from the use of tarry preparations, and have known a moist eczema to be completely healed after a very few applications of the *liquor picis alkalinus* in full strength. A common treatment in chronic eczema is equal parts of tar and oxide

of zinc ointments, with the addition of a little mercurial ointment, as the citrine, when the surface ceases to be moist.

"In one case of eczema of the scrotum, I obtained very excellent results from the repeated application, by means of a camel's-hair brush, of the compound tincture of benzoin. The man ceased attending before the thickening had entirely disappeared, and the ultimate result cannot be stated with certainty; but it is probable that the disease was cured, as the remedy was the first one tried by me, and the relief and satisfaction expressed by the patient was very great.

"Quite a large share of the cases of ordinary eczema of various parts was treated by the oxide of zinc ointment, very generally in conjunction with some internal medication, depending upon the state of the patient. Many of this class are the constant subjects of dyspepsia, and the rhubarb and soda mixture was very commonly used. I frequently add Fowler's solution to it; giving of the latter three or four drops with a teaspoonful of the former. Many of these patients require tonics, and the ammonio-citrate of iron and compound tincture of cinchona were generally used. Acute lichenous eczema I frequently treated with Startin's mixture of sulphate of magnesia, sulphate of iron, aromatic sulphuric acid, and gentian. Acetate of potassa, alone or combined, was used somewhat, and in my hands has done much for eczema.

"2. *Acne.*—Acne appears second on our list in point of frequency, and we are quite willing to accord it that place so far as the annoyance to the patient (and ofttimes the physician) is concerned. Although acne belongs rather to those of luxurious habit, it is not an uncommon affection among the poor of this city, and especially those who lead indoor lives; hence it is that by far the larger number affected are females (although it is true that, it being more a matter of vanity and not a disease affecting the welfare of the patient, males pay less attention to it.)

"The acne simplex is decidedly a disease of adolescence. The youngest persons in whom it was observed were in two girls aged fourteen; two boys aged fifteen were recorded also with this form. During the five years, from fifteen to twenty, thirty-five cases of acne applied for treatment, and twenty-nine from twenty to twenty-five years of age; thus making the total number before twenty-five years of age sixty-six, and after this period but forty-five.

"It is not easy to make out the causes of disease among this class of patients, as the time given for treating them is very limited, and the notes made are often hurried. A large share of the cases, however, depended more or less directly upon the occupation, habits, and diet of the patient. Very many were directly associated with constipation and dyspepsia, as I have elsewhere shown,* and a few doubtless with uterine derangement, as many of the symptoms were often complained of; but no uterine examination is possible in this run of practice.

"Very many of the acne patients were benefited by the internal administration of acetate of potassa

* *American Practitioner*, December, 1872.

(fifteen grains, three times daily, well diluted) on an empty stomach; but the effect of this must be followed up by tonics. Arsenic, in my experience, is of but very little use in acne. I have during the past two or three years employed quite largely the plan of treatment suggested by Gubler, of Paris—namely, the internal use of glycerine, in doses of from one to three or four teaspoonfuls three times a day, after eating—and with good results. At first I colored and flavored it, but latterly I have given the citrate of iron and quinine in it, which effects both, and assists its tonic action. This plan is especially suited to those whose skins are greasy or muddy looking, with many comedones. I have had it fail repeatedly in the rosaceous form.

"Locally, most of my patients used hot water with good results, and I have prescribed more largely than any other, a lotion containing one drachm of washed sulphur, four drachms of sulphuric ether, and three and a half ounces of alcohol, and with very generally good effect. I have rarely employed the bichloride of mercury in washes, but sometimes the well-known wash of sulphur, camphor, and water.

"3. *Syphilodermata.*—It is a sad fact that third on our list as to frequency of occurrence, come the cutaneous lesions produced by syphilis; and sadder yet, that of the ninety-eight cases of this which were recorded, seventy occurred in females to twenty-eight males. Syphilis thus gave rise to nearly ten per cent. of all the cases of skin disease. This does not include the primary sores, they seldom, if ever, appearing in this class. This percentage is much greater than that given in most other statistics; thus in McCall Anderson's ten thousand dispensary patients, but a trifle over five per cent. of the diseases were of specific origin; at the London Hospital for diseases of the skin, only about five per cent.; at St. John's Hospital for diseases of the skin, only about three per cent.; at the Boston Dispensary for diseases of the skin, the proportion was about seven per cent.; and at the Philadelphia Dispensary, about eleven per cent.

"The majority of the cases were those of the later manifestations of syphilis, the earlier or macular eruption appearing more seldom. Thirty-one were recorded as having tubercular syphilis; many others noted as having merely tertiary symptoms.

"The treatment in most of my cases has been the bichloride of mercury (one thirty-second of a grain) with from seven to fifteen grains of iodide of potassium in mixture, with tonics, thrice daily. I have combined the carbonate of ammonia with the potassium in many cases, with rather better results than from the iodide alone. Inunction was but seldom used.

"4. *Phthiriasis and Scabies.*—Animal parasitic diseases also formed nearly one-tenth of the whole number of our cases. Of the ninety-three present, fifty-seven were due to the varieties of pediculus, or louse, and have the name *phthiriasis;* and thirty-six to the acarus scabei, forming *scabies*, or itch. These diseases, preventable by cleanliness, are, I am glad to say, very much less frequent here than in Scotland; for McCall Anderson states that scabies forms fully twenty-five per cent. or one-fourth of the whole

number of skin patients among the poor in Glasgow, and Milton over eighteen per cent. at the St. John's Hospital for diseases of the skin in London. It is to be hoped the proportion here will be even more lessened as intelligence and sanitary knowledge pervades the community.

"Our common method of treatment of the head-lice among the poor is, to soak the head well for twenty-four hours in kerosene oil, which destroys all the bugs and their nits; then wash the head well with soap and warm water, comb it out, and saturate it with cod-liver oil till all the sore places are healed. This treatment is very rapid and very sure, three or four days, or a week at most, serving to heal all excoriations. Or white precipitate or citrine ointment, diluted two or three times, applied from the first, will answer in many cases, and is perhaps the best in private practice. Its value is increased by having it highly scented with rosemary or some other volatile oil. For lice of the body we generally use a combination of one drachm of caustic potash and two drachms of carbolic acid in four ounces of water, using it diluted once or twice at first, directing also the clothing to be sprinkled with it. To make the cure of any of these forms permanent, the clothing must be either boiled or baked for a long time, also the bed linen, and often the bedding itself requires attention.

"5. *Psoriasis.*—The cases of psoriasis, fifty in number, were pretty evenly divided between the sexes, twenty-seven females to twenty-three males. The youngest patient was nine years of age, a boy; the oldest, seventy, also a male; and another case of a man aged sixty. Many of the cases were of great duration; one case is noted as having lasted twenty-four years in a woman aged thirty-nine; another eighteen years in a woman of thirty-seven; of course, with exacerbations and remissions; the case of the man aged seventy was recorded as psoriasis inveterata, but no duration is stated.

"Most of these patients were treated largely by local measures alone, because of the well-known obstinacy of the disease and the frequent neglect of treatment, whereby much that had been done would often be wasted. The preparations of tar, *liquor picis alkalinus*, or Hebra's compound tincture of green soap and oil of cade, were principally used, with diluted mercurial ointments. In many of the more recent cases, arsenic and alkalies were given, but no conclusions as to results can be drawn. I have obtained, however, very marked effects from the internal administration of tar and potash as combined in the *liquor picis alkalinus*, which we have so often presented to the profession * (picis liquidæ, ℥ ij; potassæ causticæ, ℥ j; aquæ, ℥ v.), giving from fifteen to thirty drops, largely diluted, on an empty stomach. It has the direct effect of diminishing the cutaneous congestion and lessening the scales. When long-continued it may disagree with the stomach, but it is a remedy of value when others fail. Three of the patients with psoriasis —two males, each aged forty, and one female, aged forty-four — had acne rosacea. No necessary connection between the two diseases is known. In none of the cases of psoriasis

* *Archives of Scientific and Practical Medicine*, February, 1873 (Brown-Sequard's).

which came under my observation, were the tongue or lips affected; all were examined, I believe. I mention this as some have intimated a connection between the lesion known as *psoriasis linguæ* and this disease."

ON SPASMODIC URETHRAL STRICTURE. By F. N. Otis, M.D., Clinical Professor of Genito-Urinary Diseases at the College of Physicians and Surgeons, New York. New York: G. P. Putnam's Sons, 1875.

This is a pamphlet reprinted from the *Archives of Dermatology*. The views of all the principal writers and authorities as to the nature and relative frequency of spasmodic urethral stricture are first reviewed and summed up as follows:

"In comparing the views of these recent accepted authorities, in regard to spasmodic urethral stricture, it will be observed that all agree as to its frequency, its transient character, and its easy management.

"Dittel met with a case where the pressure of the end of a catheter for fifteen minutes, against the face of a spasmodic stricture, at the membranous portion, was required before it yielded. Van Buren and Keyes have evidently had similar experiences, as they note this occasional *persistence* of the spasmodic barrier. Sir Henry Thompson inclines to ignore the existence of the spasmodic stricture, and attributes to ignorance and incapacity the arrest of an instrument in its passage into the bladder, from any cause but an organic one. In this Mr. Erichsen seems quite inclined to agree, although appreciating the possible occurrence of a spasmodic stricture which should be so persistent that it *might* be mistaken for an organic contraction.

"It is not my purpose at this time to discuss the general question of spasmodic stricture. The recent investigations of Stilling (coinciding with those of Kolliker) would seem to show conclusively that the muscular capacity of the urethral surroundings are quite sufficient to account for any amount of contraction which might be observed at any point. In his own strong language (supported by several admirable illustrations of the anatomy of the corpus spongiosum urethræ) he says:* "*the corpus spongiosum is a muscle through which the urethra runs.*" Dr. Stilling so demonstrates the muscular structure of this body that it is at once seen to be an easy matter for such a contraction of the muscular structure of the corpus spongiosum to bring a strong contracting force to bear upon any part of the urethral canal.

A number of clinical cases in illustration are given. The author says in regard to the cases:

"There are several points which coincide with the accepted characteristics of true, deep, organic stricture, and which, if not appreciated, would lead, of necessity, to an erroneous diagnosis, such as was originally made in each one of the cases reported.

"1. *Gradual* diminution of the stream of urine.

"2. *Persistent* frequency of micturition.

"3. *Persistent* resistance to the introduction of *large* instruments *in the hands of skilled surgeons.*

*B. Stilling, *Die rationelle Behandlung der Harnrohren Stricturen.* Erste Abtheilung, p. 9.

"4. Distinct grasping of small instruments, and a *gradual* toleration of instruments of increasing size, and, in this, so *perfectly* simulating the behavior of true organic stricture, that the most skilled and learned surgeons have been deceived by these conditions.

"5. The *persistence*, during a long period of years, of all symptoms which are recognized by authorities, as characteristic of *organic stricture*.

"'The grand distinguishing feature,' says Sir Henry Thompson,* 'which marks the phenomena (of spasmodic strictures), and by which they are contrasted with organic strictures, is their *transitory character*.' So says, in effect, Dr. Erichsen, Dr. Bumstead, Drs. Van Buren and Keyes, Drs. Stilling, Dittel, etc., leading teachers and authorities in such matters.

"Now, if this is *not the fact* (and that it is not the cases cited go to prove), it will be readily seen that those surgeons who differentiate organic from spasmodic strictures by what is claimed to be 'the *distinguishing feature*, viz.: the *transitory character of spasmodic stricture*,' are liable to fall into the grave error of treating a reflex urethral spasm for organic stricture. It is not at all likely that the six cases I have reported, in which this error was made (in *four* cases by *none* who did not fully understand and appreciate *all the points* which Sir Henry Thompson and Mr. Erichsen and others so explicitly lay down for guidance in such cases), I say it is not *likely* that these are *all* the cases in which such errors have occurred, or are likely to occur. They are *types of a class*, and a large one too, which will necessitate the acceptance of *other* means of diagnosis than those now in vogue, before such errors can with certainty be avoided. First of these is the necessary knowledge of the *normal calibre* of the urethra, in which symptoms of stricture are present; second, *the size and condition of the external opening*. If the measurements of these two points do not completely correspond, there is reason to believe that a reflex irritation may be present, which has the power of obscuring diagnosis. If there is a stricture at or near the meatus urinarius, acquired through a previous gonorrhœa, or of congenital origin, contact of urine with the sensitive mucous surface (which is always present behind such stricture), or contact of exploring instruments, is capable of exciting a spasm at the membranous portion of the urethra; a spasm which will often *persist* even when the patient is fully anæsthetized; and will continue up to the time that a *complete* division of the stricture is effected.

"It may, I think, be safely claimed that no reliable examination of the deeper urethra can ever be made while a *stricture*, or even an *erosion*,* is present in the anterior portion of the canal. Inferentially, then, no *treatment* of deep stricture, *per se*, should be attempted until the *complete* freedom from organic contraction of the anterior portions of the urethra is established. A long series of careful observation of the urethral calibre (by the aid of the *urethra-meter*), have conclusively demonstrated a nearly uniform relation between the size of the urethra and that of the penis in which it is located. As I have stated in other papers on this subject, that the circumference of the presenting

* Op. Cit., p. 140.

* Thompson, Op. Cit., p. 132.

penis being three inches, the normal urethral calibre will correspond to 30 or more of the French scale; if three and one-fourth, to 32 or more; if three and one-half, to 34 or more; if three and three-fourths, to 36 or more; if four, to 38 or more; if four and one-fourth, to 40 or *more*.

"When the *urethra-meter* is not available, a urethral calibre based upon these calculations may be implicitly relied upon, as not over estimated; on the contrary, it will often be found one or more millimetres below. Urethral examinations with a *bulbous sound*, corresponding in size to the normal urethral calibre, *alone* can demonstrate complete freedom from stricture in any given case. The presence of the slightest contraction at any point may be accepted as capable of producing reflex irritation, which may result in spasmodic contraction, which shall possess all the recognized characteristics of a deep organic stricture."

RADICAL TREATMENT OF PROSTATIC HYPERTROPHY.—Prof. Heine has cured six cases of prostatic hypertrophy with iodine injections, and now recommends the parenchymatous injection of moderately concentrated solutions of iodide of potassium; he states in *Langenbeck's Archiv*, quoted in the *New York Medical Journal*, that the operation is not severe, and can be borne by old and weak individuals, because the diminution of the hypertrophied organ takes place without suppuration. When its volume is diminished, the secondary affections of the bladder are also relieved, provided they have not attained a high degree. The operation is performed by placing the patient on his side at the edge of the bed, and introducing the oiled index-finger of the left hand into the rectum to the point where it is intended to make the injection. An exploring trocar is then introduced on the finger, the stylet having been withdrawn into the canula, and the puncture is made. The stylet is then withdrawn from the canula, which is filled with the solution in a syringe. When the canula has been filled, an air-tight syringe is attached to the canula, and the injection performed. The median line of the prostate should not be chosen, as a small artery takes its course in this location. The author's solution is: Iodidi potass., ʒ ij.; tr. iodinii, ℥ ij.; aq. destil., ℥ ij.

COMPRESSION OF THE LEFT SUBCLAVIAN ARTERY.—On the 2d inst., Mr. McGill, of Leeds, performed an interesting operation in a case of left subclavian aneurism, by cutting down upon the first part of the left subclavian artery, and compressing it for ten hours and a half by means of torsion forceps. The case had been previously treated with great temporary benefit by galvano-puncture. The details of the previous operations were published in the *Lancet* in 1874, vol. II., p. 9. After numerous galvano-punctures, the patient was able to follow her occupation of mill cook without any discomfort. For many weeks there was very slight pulsation in the aneurism, but gradually the pulsation became more forcible, and further interference was rendered necessary. Up to the time of going to press, the patient was doing well. It may be observed that the first part of the subclavian artery has only been ligatured *once*—namely, by Dr. J. K. Rodgers, of New York, in 1846.—*Lancet*, Jan. 9, 1875.

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OBSTRUCTION OF THE INTESTINAL CANAL BY A GALL STONE.

REPORTED BY H. A. JOHNSON, M.D.

G. R. R., æt. 57, merchant, previously in good health, had, during the fall of 1874, an attack of jaundice, with some perihepatitis, from which, however, he apparently recovered. On the 30th of May, 1875, he consulted me at my office, for some difficulty of the bladder. The urine was scanty and loaded with uric acid. There was some tenderness over the region of the bladder; no abdominal tenderness, or discomfort elsewhere; tongue clean, and bowels regular. He stated to me then that his health, since his recovery from the jaundice, had been excellent; "never better," were his words. I ordered for him a diuretic mixture consisting mainly of potassa acet. I heard nothing from him again till June 6th, when I was called to visit him at his house. I then learned that the urinary trouble was soon relieved, and that he had been attending to his business till the day before, the 5th. He had been suffering all that day from pain in the bowels. During the night of the 5th and 6th there had been persistent vomiting, and the pain, which was spasmodic in character, and located in the umbilical region, became more intense. The tongue was pointed, coated in the centre, the edges clean; the temperature normal, skin natural, pulse 75 regular, urine scanty. Bowels had not been moved since the 4th. He was very restless, vomiting frequently, and the pain had become unbearable. Mustard poultices and warm fomentations had been used, but without any benefit. I ordered a pill containing one-fourth of a grain of morphine to be given and repeated every two hours till relieved. In a

few hours I saw him again. He had found some, but not decided, relief from the pain. The vomiting continued. I then ordered the following:

℞—Hydr. Chlorid. mit. gr. iv.
Sodæ bicarb. ʒ ii.
M.—Ft. pulv. No. 2.

One to be given immediately, and the other in three hours. He took them both, and I think retained them, but in the evening the abdominal pain, which had never entirely ceased, became more severe. I carefully searched for hernia, and found none. I then told Mr. R. that I feared mechanical obstruction of the bowels. Injections of warm water and salt were ordered, but without any effect, and at 11 P. M. a hypodermic injection of one-fourth of a grain of morphine was given. He was soon relieved of the pain and fell asleep.

June 7th.—Has slept about four hours during the night; says he is better; "shall be all right as soon as the bowels move." The injection of water and salt was repeated, bringing away small quantities of indurated fæces. The pain returned, and the vomiting became, during the afternoon, stercoraceous. There was also obstinate hiccough; I ordered a chloroform mixture which controlled the hiccough. Dr. Byford saw him with me in the evening. We injected about two quarts—as much as the bowel would hold—of saline solution, retaining it as long as possible by mechanical aid. It came away unchanged in character. At 11 P. M. repeated the hypodermic injection of morphine, and remained with him during the night.

June 8th.—He slept some, not as much as the night before, and when awake vomited — sometimes mucus alone and sometimes a fluid of the color and consistence of pea soup, and having a decided fæcal odor. Pain in the bowels less; but little tenderness upon pressure; not much tympanitis. Temperature has so far not been above 99½° in the rectum; the skin has not been hot—is now cool; the pulse has gradually increased in frequency; was 106 at 11 P. M., last night, about 100 this morning, small and weak. At 12½ P. M. with the concurrence of Dr. Byford, injected slowly as much air as the bowel could be made to hold, using mechanical aid to prevent its escape. The course of the colon was marked by great inflation, and there was a conical tympanitic enlargement of the abdomen just below the umbilicus.

As the air was expelled, about an ounce of a fluid, in color, consistence and odor like that vomited, followed it. After an hour, ordered small injections of beef tea.

At 3 P. M. Dr. N. S. Davis saw him with Dr. Byford and myself. Morphine, by the hypodermic method, as necessary to procure rest, fomentations to the abdomen, which had previously been used, as well as the beef tea injections, were continued. The beef tea was mostly retained, but what came away was mixed with a pea-soup fluid like that vomited.

June 9th—A. M.—Has been kept quiet by morphine; one-fourth grain given at midnight; has not slept much; the vomiting has been frequent and offensive; is very restless when the effect of the anodyne begins to pass off; pulse irregular; surface cool; is not able to retain even a half-teaspoonful of anything on the stomach; urine very scanty; is very thirsty. I told him to drink all the

water he wanted. He took a large goblet full of cold water and said, "That goes to the spot." Did not vomit it. Soon after he drank a tumbler full of milk, and kept that also. He subsequently took during the day both milk and beef tea by the stomach, but vomited, especially during the afternoon and evening. The urine became more copious, but the pulse continued to grow weaker and to become more irregular. Carbonate of ammonia and milk, with brandy and beef tea were given and continued during the night. Artificial warmth and stimulating applications were made to the surface, but all without any apparent effect upon the circulation. Morphine was used about every six hours in the one-fourth grain doses. He slept but little, and was very restless; intelligence perfect.

June 10th.—A. M.—Passed a restless night, but has not suffered much from positive pain. The abdomen is not largely distended, but the peristaltic movements are active and constant. The surface was covered with a cold perspiration; the features pinched; the pulse became, during the day, imperceptible; the eyes sunken; the breathing short and spasmodic. The retching and vomiting of small quantities of mucus and offensive matters continued; was extremely restless, requiring care to keep him on the bed. The morphine seemed to produce but little effect. These symptoms all continued into the night of the 10th, his strength gradually failing, and he died about 2 A. M., June 11th.

Autopsy 12 hours after death, in presence of Dr. W. H. Byford.—Abdomen not largely distended; adipose tissue abundant. Upon opening the abdominal cavity a portion of the small intestines were found to be very dark and congested, but there was no plastic lymph upon the peritoneal surface, and but little serous effusion. The colon was empty and normal in appearance, with the exception of a portion in right hypochondriac region where it was adherent to the liver. The ilio-cæcal valve was not obstructed. The ileum was collapsed and natural in color for about four feet above the valve, at which point a large gall stone was found firmly grasped by, and plugging up the canal. Above the obstruction the bowel was distended, containing a fluid identical in appearance with that which had been vomited. There was a marked difference in the color and consistence of the walls of the bowel above and below the obstruction. Just above at several points there was commencing gangrene. Upon tracing the small intestine up, the duodenum was found firmly attached, as was also the colon to the inferior surface of the right lobe of the liver. This whole gland was small in size, and no gall bladder could be found, but there existed in the substance of the liver, at the region of the gall bladder, a cavity containing about a half an ounce of pus not colored by bile. There was a large opening, sufficient to admit two fingers, from this cavity into the duodenum. The stomach contained about a pint of fluid. No other organs were examined.

The gall stone was firmly impacted in the bowel, is an inch and a quarter in length, with its extremities slightly rounded, and measures three and one quarter inches in circumference. It is very firm, and the surface was gritty to the touch.

REMARKS.

1. Would repeated inflation by distending the bowel below and perhaps around the gall stone have aided its descent? There seemed to have been some fluid from above the obstruction escaping around it at the time, or following the inflation that was practiced.

2. The general peritoneal inflammation was much less than usually exists in cases of obstruction by biliary calculus.

3. The presence of a pus-producing cavity in the location of the gall bladder, and the ulceration of the walls of the duodenum adherent to it, seems to have produced but little disturbance to the general health, if it existed before the 30th of May. The adhesion probably dated back to the attack of jaundice and perihepatitis in the fall of 1874.

4. Was the disturbance of the urinary secretion on the 30th of May connected in any way with the escape of the calculus from the cavity found in the location of the gall bladder into the duodenum?

5. Of five hundred cases of death from obstruction, collected by Dr. William Brinton, only 4.8 per cent. are from gall stones, and of these there were four times as many women as men. Their ages were over 50 years. The gall stones, with hardly an exception, became arrested in the jejunum or ileum.

6. Of these five hundred deaths, 43 per cent. were from intussusception, 17 per cent. were from stricture, 27.2 per cent. were from strangulation, 8 per cent. were from torsion, 4.8 per cent. were from gall stones.

7. Dr. John Syke Bristow, the author of the article on "Obstruction of the Bowels," in Reynolds' *System of Medicine*, limits the possible utility of an operation for relief to cases of strangulation and intussusception. In the other causes of obstruction, he says "an operation must, from the very nature of things, be at least useless." In reflecting upon this case, the query presents itself to my mind whether it would not have been possible, by the means of a strong needle inserted through the intestinal wall below the obstruction, to have so broken down the calculus that the fragments might have passed along the bowel.

As cases of intussusception, strangulation, and gall stones constitute 75 per cent. of all cases, and as it probably would sometimes happen that in operating for supposed intussusception or strangulation, that the cause of obstruction would be found to be a gall stone, I think the effort should be made to break it down, as suggested above, rather than the abandonment of the case when the operation had proceeded thus far.

No. 4 Sixteenth Street, Chicago, June 12th, 1875.

Translations.

GLEANINGS FROM THE GERMAN.

By H. Gradle, M.D.

DR. SALE has introduced remedies into the cavity of the uterus by enclosing them in gelatine capsules and bringing them into place by means of forceps (*Allg. Wien. Med. Zeit.*, No. 19).

Guillaumet (*Journal de Ther.*, 1874, No. 3) recommends bisulphide of carbon very highly in atonic ulcers, the surface of which he paints with the same, afterward dusting on subnitrate of bismuth or starch powder, and covering it with dry charpie, according to the amount of secretion. By the rapid evaporation cold is produced, and the granulations become pale at first but soon redden, while an intense pain, lasting twenty to sixty seconds, occurs. This is sometimes followed by local anæsthesia for hours. The violent pain, however, is lost in repeated applications. Improvement occurs very rapidly, even in the most obstinate cases. — *Centralblatt fuer Chir.*, No. 20.

According to Miremond (*Journ. de Med. et de Chir.*), five to ten grammes of red precipitate ointment applied with friction, for one to two minutes, around and to the surface of a carbuncle, causes immediate amelioration and resolution within two to three days, without suppuration.

G. Marcacci (*Lo Sperimentale*, 1875, Fasc. 1) performed laryngotomy, on account of the existing dyspnœa, in the case of a little girl whose trachea was partly occluded by a bean which had entered. The blood, however, running down the trachea, increased the dyspnœa, and all attempts to seize the bean were unsuccessful. At this moment, Marcacci, Jr. introduced a feather into the trachea, in the hope of causing a reflex expiratory effort, which really did occur, and extruded the bean. Still the child made no further respiratory movements, and only by the maintenance of artificial respiration for five or six minutes was life preserved.

A somewhat anæmic though otherwise healthy woman had suffered from an abortion two years ago, since which time a violent uterine catarrh existed, with extensive ulceration around the os. Tr. iodine, perchloride of iron, nitrate of silver, and concentrate sulphuric acid had been used in vain, until A. di' Bernardo (*Gaz. Hebdom.*, 1874) employed a solution of hydrate of chloral—two parts in twenty-five. After painting the ulcer with this five to six times, it was healed in the course of a fortnight. In two similar cases, the success was the same. B. recommends to continue the application for a few days after the ulcers have healed.

After various attempts by different physicians to render the urine acid by internal administration of different acids, which all, however, passed into the urine in the shape of neutral salts,

Gossehn and Robin recollected the peculiarity of benzoic acid, which leaves the system as hippuric acid. The same is the case with cinnamonic and salicylic acids, and the acids derived from Balsam Tolu and B. Peru. A daily dose of thirty to ninety grains of this agent has no unpleasant consequences except a slight momentary burning and subsequent dryness of the pharynx. As the drug is soluble only in 607 parts of cold water, it is best administered in a mucilage of sugar and water. In five to nineteen days, on the average about the seventh or eighth day, the quantity of phosphate of calcium, pus and blood, as well as the fetor of the ammoniacal urine of cystitis, begin to diminish gradually. The authors have arrived at the following conclusions:

1. Before undertaking a serious operation on the urinary organs, it is advantageous to obviate, or at least diminish, the alkalinity of the urine.

2. This purpose is best attained by the internal use of flores benzols, and the balsams containing salicylic or cinnamonic acids.

3. The hippuric acid contained in the urine acts in the following manner:

a. Hippurate of ammonia is less poisonous than the corresponding carbonate.

b. Hippuric acid retards the fermentation of the urine, and hence also the formation of carbonate of ammonia.

c. It prevents likewise lithrasis and consecutive cystisis.

4. Hence the drug is indicated in purulent cystitis.—*Allg. Med. Cent. Zeit.*, No. 40.

Editorial Department.

AMERICAN MEDICAL ASSOCIATION.

THE address of Dr. Austin Flint, of New York, as chairman of the Section on Practical Medicine, Materia Medica, and Physiology, was read in the general session of the Association on the second day of the meeting, and was listened to with great attention. Dr. Flint referred very briefly to such topics in Materia Medica and Physiology as have been the subject of special investigation during the past year, including the localization of motor centres in the periphery of the brain, the consumption of alcohol in the living animal system, and the transfusion of blood.

Concerning the latter topic he stated that, though many experiments had been performed, both in the transfusion of the blood of animals of the same and of different species, yet the results did not justify the establishment of any practical conclusions concerning the remedial value of the practice in the treatment of disease. Although he alluded somewhat at

length to the recent experiments of the late Dr. Anstie, and others, concerning the effects of alcohol and its retention in the system to the extent of six hundred grains per day, he gave no explanation of the alleged fact. It is well known that Dr. Anstie in his latest experiments on animals, claimed to prove that only a small part of the alcohol introduced into the system was eliminated again in the form of alcohol; but that an amount equal to six hundred grains of pure alcohol was capable of being taken daily and consumed in the system of an adult man, without re-appearing in the excretions or inducing any toxemic or deleterious effects. And he stated that if alcohol to the extent of six hundred grains could be thus consumed in the system without either affording material for nutrition or the generation of force, it would constitute one of the most singular facts in the domain of science. Such a statement is evidently founded on the assumption that all substances taken into the system and retained, must either be added to the tissues as food, or enter into such combinations as to generate force. But is such an assumption justified by the known facts concerning the action of medicinal agents in the living system? Is it not true that the preparations of lead, mercury, arsenic, and many other poisons, may be taken in small doses, repeated daily, and much of them be retained in the system, without inducing direct toxemic effects? We had supposed it to be a well known fact in chemistry, that some substances were capable of exerting a catalytic action, in some instances by their presence retarding the combination of other substances, and in others increasing it. And we see no reason why alcohol, by its affinity for the albumen and water of the blood and tissues, may not be held in the human body in small quantities without being eliminated with sufficient rapidity to be readily detected in the excretions, and instead of being itself appropriated as nutritive material, simply act as a retarder, both of atomic changes and of the organic forces. Indeed, the playing of such a part in the animal economy, by alcohol, is in strict accordance with all the results of experience. After noticing briefly the chief topics concerning which recent investigations had been made, Dr. Flint devoted an important part of his address to the subject of the natural history of crime, with special reference to its connection with the physiological and pathological condition of the criminal. He urged the adoption of measures for a systematic investigation of the subject; and at the close of his address he was requested, by a vote of the Association, to continue his researches in this direction and embody the results in a future report.

MEDICAL DEPARTMENT OF THE UNIVERSITY OF CHICAGO.—We understand that the Rush Medical College, of this city, has effected a permanent union with the Chicago University, and will from this time forth be known as the Medical Department of the latter institution.

UNIVERSITY OF MICHIGAN.—The Regents of the University of Michigan have finally accepted the act of the

Legislature of that State providing for a College of Homœopathy in connection with the Medical Department. The special school is to consist of two professors, one of Materia Medica and Therapeutics, the other of Practical Medicine. For instruction in all other branches the students are to attend the old Medical Department. It is reported that Dr. Sager, one of the oldest and most influential members of the regular medical faculty, has resigned. His chair was that of Obstetrics and Diseases of Women.

Correspondence.

A LETTER FROM PARIS.

EDITORS MEDICAL EXAMINER: The Parisians are very fond of journals. Those secular are in myriads, while those devoted to medical subjects may be counted by dozens. One can have a fresh medical journal every day, Sundays included, and some days many appear together. There seems to be no established rule for time of publishing. Certain journals make their appearance every three months, as the *Revue des Sciences Medicales;* others come every two months, as the *Archives de Physiologie*, while there are innumerable monthlies and several semi-monthlies, as for instance, the *Journal de Therapeutique*. Then there is an "every ten days" paper named the *Journal des Connaissances Medicales Pratiques et de Pharmacologie*, and we find eight or ten weeklies, among which the *Gazette Hebdomadaire de Medicine et de Chirurgie* occupies a prominent position. Shortening the dates we next arrive at the *France Medicale*, which is original in appearing twice a week. Finally we reach the *Gazette des Hopitaux* and the *Union Medicale*, which are published three times a week. My "finally" was perhaps a little too positive, for there is a journal, the *Bulletin de la Medicine et de la Pharmacie Militaires*, that is announced "to appear at irregular dates, whenever important matter necessitates its publication." As far as quantity goes there is nothing to complain of, but, unfortunately, one can see very plainly that a consolidation of many of the now separate publications would be a great boon to the profession. The difficulty seems to be that each man of any prominence must have a journal of his own which he can control and which shall be devoted to his own ideas. This way of working of course makes the number of journals great, but each one, more or less dependent upon the writings of its owner, is obliged to be filled up with copied articles. But let us look over some of these journals. Here, for example, is the *Archives de Tocologie*, including the diseases of women and children, which is edited by M. Depaul, Clinical Professor at the Paris school. The reputation and vast experience of the

Professor insure a certain number of valuable and instructive articles, but one hardly cares to subscribe for a journal largely dependent on the writings of one person. On the same subject there is another publication, also monthly, the *Annales de Gynæcologie*, which is edited by Messrs. Pajot, Courty, and Gallard. The objection of personality does not apply so strongly to this journal, although one naturally regrets that it lacks the support of the clinical professor. To keep well posted one is thus necessitated to subscribe for both journals. Another branch is well represented by the *Bulletin General de Therapeutique* of Professors Behier, Bouchardat and Dolbeau, and by the *Journal de Therapeutique* of M. Gubler. Each of these journals is as a rule well supplied with original and instructive articles, and the latter, though only in its second year, is justly popular. M. Gubler is regarded as possessing a thorough knowledge of the state of therapeutics at the present day, and his articles and lectures on this subject are certainly without superior in France. However, the necessity for his enlarging the number of journals is not apparent, and the objection of personality still holds good. To get his articles one must make room on his already crowded table for another journal. Viewing the mass of publications, the wish is only too natural that the good might be condensed into half a dozen, or indeed a dozen, journals, as in this way might be saved a vast amount of paper, time, and patience, to say nothing of the smaller item of money. But to continue, students are rather partial to the *Progres Medical*, a weekly that gives considerable space to information on changes in the hospital services, and such other news as students are interested in. Mentioning this journal reminds me of a great difficulty that a stranger always meets with in visiting the Paris hospitals. The buildings are so extensive, and the wards so numerous, that it is almost impossible to find any particular service without a guide. There is no bulletin board to aid one, and many times the visit is made and the morning wasted without one finding the object of his search. The *Progres Medical* has had the enterprise to publish, at the opening of the winter session, what is called a "student's number," in which the location of each hospital is printed, with the names of the attending physicians and surgeons, the names of each of their wards, and also, as far as possible, the days and hours of lectures. With this in hand, one can make a hospital visit with some confidence. By procuring a copy of this number, at the office of the journal (6 Rue des Ecoles), the medical visitor will save much time, as I can guarantee from sad experience. Most every one reads the *Gazette des Hopitaux* or the *Union Medicale*, the two tri-weekly journals. The former has under its proper title the words, "La Lancette Francaise," but it is rather an insignificant affair when compared with its London rival (sic). However, this journal has a very firm footing, and occupies a prominent position. As its name shows, the articles that it contains are on cases and lectures of the hospitals, and, though not too prompt as to time, one can get a very fair idea of what is going on in the public service of Paris by reading this paper. The *Gazette des Hopitaux*

is reliable, and all its editorials are conservative, as representing, so to speak, French medical opinion authoritatively. Of course, with so many medical publications, there is a great demand for material to print. One subject is common property—that is, the reports of the various scientific societies. Nearly every number of each journal gives a goodly space to these reports, and the editorial page is generally devoted to consideration of discussions in the Academy. The journals that appear at longer intervals as a rule have one or more original communications, but under this head are found quantities of articles by the internes of the hospitals. The weeklies and tri-weeklies are sometimes hard pressed for material, at least apparently, and their pages are filled with essays that would be interesting to the general public. This is not so bad a way after all, for one finds in his medical journal interesting reading on history, travels and events of the day. The *Union Medicale* has a "Feuilleton" that nearly always contains some amusing and well-written article, though the choice of subjects is very varied. One day we find an account of transactions in the French school in 1600 or 1700; another day an essay on women-doctors, while in the number I have before me there is a criticism on the paintings in the exhibition that is now open (Salon of 1875). The writer keeps in mind that his article will be read by medical men, and therefore treats his subjects from a medical stand-point. He criticizes the portraits of physicians, of which there are many in the exhibition. Nor is the writer mild in some of his criticisms. Mentioning the portrait of a certain French doctor, he writes: "It is signed by an American name, which I prefer not to mention so that I may be more at ease in saying how horrible I find this portrait." Then he discusses the particular defects that he finds in this subject. However, he does not limit his severity to the work of the American, but writes of one work of art as follows: "Another painting, numbered 337, and marked 'Venus,' is interesting to pathologists. This large woman, red and naked, but whose nakedness does not seem to embarrass her, is troubled with several diseases, the nature of which it is possible to determine approximatively. The swelling that deforms the right thigh, and seems to place the buttock as high as the loin, the turning inward of the lower limb of the same side, and especially of the foot, indicate perfectly that there is a coxo-femoral luxation of the ilio-ischiatic variety. The left leg, on the contrary, is arranged in such a way that the inner side shows to the front while the thigh of the same side rests in the normal position. Was there a luxation of the knee of this side which has left after it this singular change in the respective position of the vertical axes of the two segments of the lower limb? These lesions are doubtless explained by the lymphatic character of this unhappy Venus." In this style he reviews the works of art in the exhibition, and his criticisms are generally very just, as any one would admit after viewing the paintings.

The general appearance of the medical journals of this city is by no means handsome, and everything seems arranged with a prominent idea for economy. Yet the subscription

price is not, as a rule, low, and one has to pay from fifteen to thirty francs (three to six dollars, gold) a year for each journal, which is proportionally much more than we pay in the United States, where the expenses are so much greater. French journalism, whether medical or secular, is "sui generis," and is not imitated by other nations—shall I add, fortunately?

When Professor Pajot launched his thunderbolt against the use of anæsthetics in natural labor, it seemed as though the quietus had been given to discussions on this subject among the physicians of France, but now there appears in the *Annales de Gynæcologie* for May an article by Dr. Chouppe on the advantages of using the hydrate of chloral in labor. The writer starts off with an half-apology for writing on this subject at all after the essays of M. Campbell and Prof. Pajot (particularly the latter's), and states that he does not intend to discuss anæsthetics in general, but merely desires to show the most recent experiences with the chloral under the circumstances mentioned. He gives to M. Ore and to Prof. Vulpian the credit for demonstrating the anæsthetic power of chloral, although he admits that England, "the country of obstetrical anæsthesia," was the first place where chloral was given during labor. An examination of the dates that he records—1870, the year when Dr. Lambert first *published* his results in Edinburgh; 1872, the year of the first *trial* in France, and 1873, 1874, the years of Messrs. Ore and Vulpian's experiments—such an examination shows that France has as little to claim for this procedure as for other anæsthetical advancements. Dr. Chouppe gives at length the history of twelve cases, five of which appear for the first time. Following these histories is a table of thirty-seven cases collected from different sources. Among other data this table records the condition of the os uteri when the chloral was given, the amount of the drug that was exhibited, and the results of its use. In twenty-nine cases the anæsthesia was complete after the use of from two to eight grammes of chloral. Three cases are recorded as showing no signs of anæsthesia after doses, in the respective patients, of six decigrammes, four grammes, and eight grammes. "Prolonged anæsthesia" was produced in two patients after the use of twelve and sixteen grammes, while the other cases are recorded as having shown a momentary or partial anæsthesia. To prove that chloral does not interfere with uterine contractions, Dr. Chouppe gives the details of one experiment on a bitch. The abdomen having been laid open, so that the uterus could be easily examined, the contractions of the latter were tested, and then two grammes of chloral were injected into the intestine. Contractions of the uterus remained as before, and the same was the case after a second injection of two grammes, although the animal was completely insensible.

In a long resume of the question, the writer announces that chloral gives relief from pain to the woman in labor without interfering with uterine contractions, that it does this with no danger to mother or child, that it is chiefly indicated in tedious labors and with primiparæ, for the nervous and the hysteric. Without trying to furnish a definite rule, he mentions that the best time to give the chloral is

when the os has dilated and the expulsive pains have commenced. The only objection to giving the drug during the process of dilatation is that the woman must be kept under the influence of the chloral for a long time. For counter indications in its use he refers the reader to the works on therapeutics, but states that a great number of the supposed counter-indications are only imaginary. In general he considers from two to four grammes sufficient, and recommends that it be given either in two doses, with an interval of half an hour, or, for less rapid effect, one gramme every fifteen minutes. When there is any difficulty in giving it by the stomach, it can as well be given by the rectum. He hazards the opinion that chloral may have disinfectant qualities, and believes that much is yet to be learned regarding such qualities in this drug. On the whole, this article of Dr. Chouppe does not contain much that has not already been worked up in other countries, but, as it will insure the knowledge of these facts in France, its publication will be in no way out of place.

Another new remedy has made its appearance, and is now trying its powers on the inmates of some of the Paris hospitals. The last number of the *Journal de Therapeutique* contains a communication from Dr. Henry Blanc, of Bombay, and this article is entitled, "Notes on the External Use of the Powder of Goa for certain Diseases of the Skin." The nature of the powder has not yet been fully decided, for Dr. Blanc writes of it as follows: "It is a vegetable substance, but its origin is still enveloped in mystery; it is fabricated at Goa, and by some it is thought to be from a kind of lichen that is exported in large quantities from Mozambique; others believe, and among them Professors D. S. Kemp and Attfield, that it is from the dry pith of a tree of the Coesalpina order. A large quantity is imported into India, and as only a few grammes are needed to cure an acute attack of herpes circinatus, the natives use a great deal of it." The Doctor narrates his experience with the Powder of Goa in treating "ring-worm," and writes that when all other remedies had failed, he was with this powder able to cure in a few days all the many cases that he had in charge. The manner of applying the substance is very simple. After moistening the diseased surface, the powder is rubbed in by the finger. For internal use an infusion and aqueous extract are made, but Dr. Blanc does not give any details concerning its value when used in this way. Analysis shows that the powder contains a very large quantity of chrysophanic acid. This acid, with certain resins and a bitter principle, are thought to contain the therapeutic principles of rhubarb. From this Dr. Blanc believes that the Powder of Goa may become a rival of that drug. M. Gubler has received a quantity of the powder, and is experimenting with it at the Beaujon hospital. We will have to await the result of his observations.

C. C. MATTESON.

PARIS, June 2, 1875.

Society Reports.

CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, JUNE 14TH, 1875.

Reported by E. Warren Sawyer, M.D.

VICE-PRESIDENT Dr. Hamill in the chair.

Dr. Warn read an abstract of Dr. Byford's paper on the treatment of uterine fibroid tumors by the use of ergot. The paper contained an interesting consideration of the kind of tumor which was most amenable to treatment, the form of ergot most eligible, and the best manner of administering the drug.

Those tumors situated most nearly to the mucous surface are the most favorable for this treatment, though in one instance which was frequently examined by Dr. Byford, a polypus, with a long pedicle attached to the upper part of the cervix, but projecting into the vagina, was seen to decrease rapidly in size under the influence of ergot.

Squibb's fld. extract of ergot is the most reliable for internal use, and the solution of the watery extract of ergot in glycerine, as suggested by Dr. Way, is the most eligible mixture we now possess for hypodermic injections.

Dr. Byford selects the internal administration of the drug; giving a fld. drachm, three times daily, the treatment to be kept up for months, according to circumstances. In some cases, the combining of the drug with belladonna increases the good effect. The hypodermic use of the drug is not usually painful, nor do abscesses commonly follow; thus Hildebrandt says that in one thousand subcutaneous injections not one abscess resulted.

The paper contained an account of many cases of this use of ergot, some under Dr. Byford's observation and others under the care of various observers throughout the country, who had communicated the results to him. In all, 103 cases had been reported: in twenty-three instances the tumors disappeared entirely; in thirty-eight it was diminished in size; in nineteen the hæmorrhage was arrested and the patient relieved, while only twenty-one resisted entirely the effects of the treatment.

Dr. H. A. Johnson reported a case of intestinal obstruction, in which after death a gall stone was found blocking up the small intestine.

Dr. A. Reeves Jackson exhibited to the society two sizes of a new vaginal speculum, and made some remarks upon the same. The instrument is a single-bladed Sim's speculum, the blade being flattened somewhat and shorter. It is designed to be introduced into the vagina over the posterior commissure, and with it the perineum dragged backwards; in this way the vagina becomes inflated and, because the patient is upon her

back, the os and cervix are low down and very near the vulva. Over Sim's instrument it has the advantage that the patient is upon her back (in the lithotomy position), which is much more favorable for anæsthesia. Sargent, of this city, has made the instrument of a new alloy, which has the appearance of gold, admits of a fine polish, and which is almost unaffected by acids.

Gleanings from Our Exchanges.

BIOMETRY.

By MOREAU MORRIS, M.D., NEW YORK.

From the Sanitarian, July, 1875.

FROM the earliest history of medicine there has always been recognized an indefinable something inherent in the human system, varying in degree and force—this has been variously designated the "tenacity of life," the "tolerance of disease," the "natural vigor of constitution," the "vis medicatrix naturæ,"—by which some individuals seem to be able to endure and pass successfully through the most serious of maladies, or the most severe injuries, without succumbing. Many instances might be enumerated in illustration, but every practitioner will readily recognize such examples in his own experience. How often persons have recovered after injuries, gunshot wounds, and exhaustive diseases, who, at the time, to all human foresight, seemed beyond recovery.

There is some inherent principle which mysteriously sustains life through these severe onslaughts. We must recognize a "vis preservatrix" and a "vis a tergo." What this force consists of neither Anatomy, Physiology, Pathology, Microscopy, nor Chemistry has been able to elucidate. We know that man inherits vital properties which are in force from conception to death; that his various components are endowed with life-times of variable duration; that, like other living things, some parts decay and perish before others in regular succession. One day we see the plants beneath our feet spring up, throw out their green leaves and budding flowers, all endowed apparently with vigorous blooming life; and in a few months, or perhaps days, their flowers, leaves, and stalks fade, wither and die. These are but prototypes of man. He springs up, flourishes for a time in full vigor, and one by one, his secerning organs fail, until at last his physical entity ceases. The vital property has ceased to carry on its secretive power in one organ after another, until it can no longer sustain life. It is not within human ken to describe this vital property.

God breathed into our bodies life, which proceeds under the various laws of our being, so long as they are not violated, until the human machine wears out. It is within our power to cut it short, but not to prolong it beyond its natural inheritance. We can study its processes, observe the laws which govern it, judge of its force approximately, see its manifes-

tations, and *estimate its probable period.* There are certain *uniform indications* by which we may judge of man's *probable life-time.* Some are *endowed* with short life, some with a probably long and healthy life.

Inherited tendencies, habits of living, occupations, observance of sanitary law, and residence—all have their direct bearings upon the question of longevity. Acute diseases, accidents, etc., have their life-shortening influences. All of these must be studied in their various relations to length of life.

The study of biometry is comparatively of but recent date. Like every other science, its study involves labor and care; statistics are to be collected and compared, its rules and laws elucidated and fixed, to make its practical application of value. When these laws become understood, their application is readily recognized. In medicine, in life insurance, in business, in social life, in a higher elevation of mankind generally, both physically and morally, the application of the science of biometry will be found invaluable. The laws of natural selection, by which physical perfection may be attained, will find in its exposition the true guide-posts by which to accomplish that much-desired result. Intuitively we all apply its principles, even without, perhaps, being able to analyze the reasons for our judgment. The physician, by observation and long force of habit, is constantly applying its fundamental truths. He sees nature asserting and exhibiting wonderful endurance and adaptation under the most adverse circumstances, yet he is unable to define or explain the reasons.

In every-day life we constantly apply its principles in our intuitive estimation of our fellows; we judge of men's qualities or adaptation for certain kinds of business without system or explainable method.

To Dr. T. S. Lambert, more than any other man, belongs the credit of having studied and reduced to a scientific basis the development and application of this instructive and interesting science. During many years of close application and observation he has fortified its truth by thousands of examples, and so simplified its practical application to the business of life-insurance, that its laws have become the fixed data in estimating the probabilities of life's period; and as this business, when scientifically and successfully transacted, very largely depends upon a correct estimate and judgment of the probable length of any proposed life, as a matter of security and equity, its application in this direction has already, in the company with which he is connected, reduced the hazard of the business to one of great certainty.*

The laws of biometry are abundantly illustrated by heredity. The histological characteristics of persons when studied under these laws present the most convincing proofs of the status of biometry as a true science. In the examination of the ancestral histories of thousands of individuals, the deductions therefrom establish the fact that certain measurements can be relied upon almost infallibly, by which to read backward from the person the life characteristics of the ancestry, and hence inversely to determine the individual's life probabilities. So, when we find a person presenting these general measures in due proportion, we may judge, almost invariably, of his powers of resistance or natural vitality. If so be he is descended from a healthy, long-lived stock of both parents, almost without exception it will be found as a rule that he is both healthy and long-lived, able to endure much hardship, resist grave maladies, and to recover from the most serious injuries and great nervous shocks.

* The former method of basing the cost upon the general average death rate of all mankind, as deduced from various experience tables, has, in that company at least, been discarded, and the results already accomplished by the application of this science to the problem has created the greatest astonishment in the life insurance world. Death ratios, from having been ten to twelve per thousand among selected lives, are reduced by this method with almost absolute certainty to less than four per thousand; hence the direct pecuniary benefit to the world, as respects life insurance, is more than three-fold as regards the proper cost to such risks.

Again, it is found from observation that where there has been long and vigorous ancestral stock upon one side, with perhaps short life engrafted from the other, such person will arrive at a period of partial decline, with ill health, and subsequently recover, living on and beyond this deflection, being sustained by the vitalizing, secretory influences of the longer-lived ancestor. A moment's reflection will call to mind many such instances, as when persons have remarked that at a certain period of their lives they were suffering from some special disorder, from which, after a period, they have seemingly entirely recovered and enjoyed sound, robust health.

That longevity is a resultant of heredity no one will dispute, and that it does not wholly depend upon race, climate, mode of life, or special observance of sanitary law, is also a self-evident fact. Those who have inherited it can, seemingly with impunity, almost defy all sanitary law, and yet continue to live up to and beyond the allotted limit of "three score years and ten," while those who have not inherited long life cannot by any system of life, or observance of the laws of health or process of prolongation, protract their naturally short-lived inheritance. Of course we must admit that abuse can and does shorten the lives of the naturally long-lived, and acute disease or great injuries cut them off suddenly; but the rule holds good that the naturally long-lived inheritance affords that innate power of resistance which will carry them through disaster and disease that will certainly destroy the naturally short-lived.

The probably short-lived may be equally healthy and robust, and able to endure almost as much, while that life lasts, as the longer-lived, yet it seems to be the fact and nature's law, that the period of existence has had its set limit beyond which no process of prolonging can avail to carry it beyond the allotted period. The secerning elements of the vital organs have their limits, and hence control the existence of the whole organism. We see this illustrated in almost every organ of the body; certain parts cease to perform their functions, die out; and, so long as these are not vital, life continues, although it may be in a restricted sense — as, for instance, persons become bald, or partially so, at a certain age; they say the same occurred in their ancestors at about the same age; others find their digestive powers failing and remark the same thing as having occurred in their parents or grandparents. The secretory vitality of these parts is then seen to follow the law of heredity.

Without an inheritance of long-lived secretory powers it is in vain to expect any great degree of longevity in the descendants.

In estimating the probability of a life-time, it is entirely useless to depend upon the general average of human life. This rule holds good only as respects human life at large, and therefore we must look beyond life statistics to sum up the problem. *With the duration of individual life general average holds no command.* Ancestral longevity will not obey the general average law, but defies death in many shapes, holding on tenaciously until the machine, actually from rust and the interstitial deposits of years among its most delicate parts, wears out. * * * * * *

Dr. Lucas, in his *Traite Physiologique et Philosophique de l'Heredite Naturelle*, remarks as follows: "The *average of life* plainly depends on locality, hygiene, and civilization; but the *individual longevity* is entirely exempt from these conditions."

"Everything tends to show that long life is the result of an internal principle of vitality which privileged individuals receive at their birth. It is so deeply imprinted in their nature as to *make itself apparent in every part of their organization.*"*

The foregoing statement of Dr. Lucas is also quoted with emphatic approval in a recent work on Heredity, by Ribot, of whom Dr. Lambert

* The italics are ours.

remarks that he "may be justly regarded as the ablest of European writers upon this subject."

This interesting and practically important idea of the different lengths of life is well illustrated in the hair glands on different heads, not only, but on the same head. Some hair glands inherit a life of ninety years, while their fellows terminate their inherited longevity at twenty years or under. * * * How often we see baldness follow ancestry, even in quantity and position; and the question cannot be avoided, Does not analogy legitimately argue that a similar condition should be expected in every other organ of the body possessing a community of glands?

It is not enough that we analyze the appearance of patients, so that we can discern which *organs* are affected; but we should be able to recognize to what *extent* they are impaired, how large a *portion* of them has reached the natural terminus of the longevity belonging thereto, and which is bound to die then and there. If this portion is large enough, and belongs to a sufficiently vital organ, to commit homicide upon the other organs of the body depending for life upon the dying portions, it matters not how long-lived the other portions or the other organs may be by inheritance, they must then and there die from inanition. Marasmus is an apt illustration of a homicidal death by this method.

In such cases there will be at first a general appearance of much vigor, and a man of but little observation would be likely to prognosticate recovery, not remembering that the chain is never stronger than its weakest link. We must observe the weak spots. Then shall we find that many more deaths are produced by natural, unavoidable causes—namely, the termination of the inherited naturally short life of some organ or portions of it indispensable to the continuance of the whole, than we usually have supposed; whilst again many recover from severe attacks on account of the inherent longevity of such a proportional part of the diseased organ that there really was no danger of dying, even under the worst kind of treatment. These suggestions account for the apparent success of quacks and ignorant pretenders. * * * By instituting comparisons, or observing certain general configurations uniformly found in a very large number of individuals, it has been found that certain universal conditions pertain to the long-lived and to the short-lived exclusively. These are found in the size, shape, proportion, color, and capacity of all parts of the body.

Thus we can compare persons descended from long-lived with those from short-lived ancestors, and notice the differences which, as a practical fact, are *found to be well-defined;* for example, the following: the comparative size and shape of the head; the colors of its external components, as hair, beard, eye-brows, eyes, shape and size of nose, lips, chin and features in general, and their comparative relative measures; the trunk with its relative proportions. It may be here remarked that the *length* of the trunk has even a more important significance than the circumference; for when the proportion of the trunk is in excess of one-third the height of the figure, we may be assured of corresponding great life, tenacity and capacity. A comparatively long trunk gives us a form that affords room for the functions of respiration and digestion, the two most important life-sustaining functions of the whole organism.

Given good respiratory capacity and good digestive apparatus, may we not prognosticate a healthy, vigorous constitution?

In looking over these indicative points, even in the sick, we need also to inquire into ancestral characteristics. What has been, not the average, but the special duration of the antecedent lives of the individual's progenitors? What were their peculiar diseases, family diseases, so called; and of what diseases, and at what ages, did they die, if dead?

Here lies the clue to the factors of

the disease under observation in any given case.

By observing and applying the laws of biometry in the treatment of disease, the medical man places himself in the front rank of the benefactors of mankind, and he is also thereby enabled the better to apply the great laws of hygiene. Observing the temperament, the tendencies to some special form of disease, the predispositions, he is qualified to extend his warning advice regarding occupation, residence, and habits of life, and to suggest at what periods of life may be expected certain ailments, and the necessary precautions to avoid, if possible, their worst effects.

Thus, in applying the laws of biometry, we may not only be useful to our fellow-man in curing disease, but also as conservators by our forewarnings.

QUINIA AS A STIMULANT TO THE PREGNANT UTERUS.

BY ALBERT H. SMITH, M.D.

From Obstetrical Journal of Great Britain and Ireland, June, 1875.

THE active discussion carried on for several years past as to the effect of quinia upon the gravid uterus, and especially the diversity of opinion among observers, make it desirable to bring forward any facts which may tend to place the remedy in its proper position in the materia medica of obstetrics. Having for several years, and more carefully during the last few months, noticed the action of quinia during the various periods of pregnancy and parturition, and having been enabled to draw some practical conclusions of no little value to myself, I have thought that, perhaps, a brief statement of my results might be of interest to the College.

I. As to its effects upon the uterus in a quiescent state, I have, of course, only been able to make observations incidentally, giving it for the treatment of constitutional affections arising in pregnant women. But I think the experience under such circumstances is quite sufficient to establish the fact that quinia has no power in itself to excite uterine contractions. Since the subject has first been agitated, I have at many times had under care pregnant women, with disease of malarial origin, to whom I have administered quinia sulphate in doses varying from twelve to twenty grains in the twenty-four hours, without the slightest manifestation of any disturbance of the uterus; still further, I have had cases in which, with symptoms of malarial poisoning, the pregnant uterus had already become disturbed; where there were pelvic distress, tenesmus, and sacro-lumbar pain of a paroxysmal character, and where I have administered quinia in large doses, as before mentioned, with the happy result of relieving the constitutional symptoms, and at the same time of quieting the local pains. The cases could be given in detail, if time allowed; but having no points of interest, except the single facts already mentioned, it would be useless to occupy the time of the College with them.

II. As to the effect of quinia upon contractions of the uterus developed prematurely, from accidental causes, in abortions or early deliveries, my observations have been too limited to establish any positive results; but in five cases I have administered fifteen grains of the sulphate, after the process had advanced beyond the possibility of arrest, and the pains were recurring with regularity, and in none

of these instances did I observe any increase in the frequency or efficiency of the contractions, or, when there was hæmorrhage, any lessening of the flow.

These observations, so far as they go, would forbid our placing quinia in the same rank with ergot, as an excito-motor stimulant with specific effect upon the uterine muscular fibre; for we know, from the experience of all observers, that ergot will not only increase the expulsive efforts of the womb when already excited, in any period of pregnancy, and in the *early* stages of hæmorrhagic abortion diminish the flow of blood by causing a condensation of the uterine fibre, and a partial closure of the open vessels from which the placenta has been detached; but that it will also throw the uterus into active contraction from a state of entire rest. In a case under my care recently, when I found it necessary to bring on labor for the expulsion of a dead fœtus, I failed to arouse the uterus to action by any of the ordinary methods in use, until I began the regular administration of ergot in full doses, when a prompt effect ensued.

III. When the uterus is in normal labor at full period of gestation, then we have quinia playing its legitimate part as an aid to parturition; and it is with special reference to its use under these conditions that I have brought the subject to your attention. For a number of years I have been in the habit of using quinia occasionally in cases of marked inertia during the stage of dilatation, in combination with other remedies, such as the administration of diffusible stimulants or hot drinks, abdominal friction, or any other means that might suggest itself in preference to the use of ergot, which, with its dangerous influences upon the child and its occasional fearful risk to the mother, and with its annoying uncertainty of action, I have long since proscribed, or at least limited, in its use during the first and second stages of labor, to rarely exceptional cases.

But for a few months past, I have been experimenting with sulphate of quinia as a promoter of normal labor from the onset of the process, and the observations, although made in a limited number of cases, show a uniformity of results which I think does not admit of the supposition of a mere coincidence. Since I began the use of the quinia, I have had under care forty-three patients of my own, besides others whom I have seen in consultation, and the experiments have been made upon forty-one of my own, aud one of those to whom I was called; of the other two cases of my own, one was a case of placenta prævia allowing no delay for experiments, while the other was completed, and the uterus in a state of firm contraction upon the placenta before I reached the patient; all of the cases to which I was called in consultation, except the one mentioned, were cases requiring forceps or other mechanical interference, in which I had nothing to do with the case before or after such aid was rendered. I mention these points to show that the forty-two cases upon which my conclusions are based were not selected, but were in the ordinary run of every-day practice. To each one of these I administered at my first visit, after actual labor-pains had begun, fifteen grains of sulphate of quinia in one dose. In every case I observed within fifteen minutes, a decided increase in the frequency and vigor of the contractions, a rapid progress of the labor, and where there was no obstruction, a speedy termination. In ten of the cases there were delays arising from malposition, from deficiency in size of the pelvis, or from disproportion of the head, requiring manipulation or instrumental aid, and all of them necessarily involving tedious dilatation. The remaining thirty-two were terminated with surprising and gratifying rapidity.

Without wishing to prolong the subject by citing the details of cases, more interesting to the observer than to others, I may mention a few typical examples.

One lady whom I saw at the request of a professional friend, was a primipara, 26 years old; had been in labor since two o'clock in the night; I saw her at twelve, noon; pains at long intervals and feeble; os only slightly patulous; no decided dilatation; strength becoming exhausted; the patient was nervous and anxious. I advised the use of sulphate of quinia fifteen grains. A few minutes after its administration a hard pain came on, followed in rapid succession by others; the os began to dilate, and in half an hour the membranes ruptured, the head coming down upon the perineum in a few more pains, and just before one o'clock, less than an hour after I had first seen the patient, the child was born. The uterus contracted firmly upon the placenta, which was removed by pressure and traction; no relaxation of the uterus or hæmorrhage more than a proper amount occurred.

A patient with her sixth child, who had had long and tedious labors previously, followed always by profuse flow, and in her last by violent flooding, had been three hours in slight pain when I first reached her; the os was just patulous, soft and flaccid, the pains making no impression in dilatation; administered the same dose of quinia as above. In a few minutes the uterus was roused into active contractions, and in half an hour the labor was completed. There was no delay in the delivery of the placenta; no disposition to hæmorrhage; on the contrary, the flow very moderate.

Another, with whom in two previous labors I had used forceps to combat the effects of inertia, had been ten hours in slow labor when I reached her; the os had but just begun to dilate; the head being forced but slightly against the rim of the cervix by the contractions. I immediately administered the full dose of quinia; the pains began in fifteen minutes to increase in frequency and intensity, and in a little over an hour the fœtus was expelled without any instrumental aid.

Other cases equally striking might be given in detail, but it would unnecessarily occupy space.

The conclusions that I have arrived at in regard to the action of the drug in these cases are as follows:

It increases the activity of the normal uterine contractions; the pains becoming more frequent and more intense, the expulsive power being greater, while the yielding of the circular fibres of the os is more prompt; the contractions maintaining their proper intermittent character, the relaxation and rest in the interval being complete; showing in this respect an entirely different action from the continuous spasmodic contraction caused by ergot. The efficiency of the contraction may be judged of from the fact, that in the thirty-two cases having no obstruction, although many were primiparæ, and a larger than usual proportion occipito-posterior positions, the average duration of active labor after the quinia was administered was about one hour. In a considerable number of the cases included, I had in several previous labors required to use forceps to combat inertia in the second stage.

It promotes permanent tonic contraction of the uterus, after the expulsion of the placenta. Several of the patients had had flooding under my care previously, some of them habitually, and some stated they had always had a profuse and weakening flow in all their other labors. In the whole forty-two I had not one case of flooding, and as a rule the uterus contracted firmly after the second stage was completed, and showed no tendency to relax afterward.

It diminishes the lochial discharge to a normal standard; many of the patients expressed surprise at the small amount of flow during the twenty-four hours following labor.

Its use is followed by less afterpains than usual in a majority of cases.

It reduces the frequency of the mother's pulse, and relieves the nervous demoralization so often seen in the first stage of labor.

Given during parturition, it never disturbs the brain or causes its usual unpleasant effects, even in patients who at other times are very susceptible to its influence. Although the dose has been uniformly fifteen grains, in only one case was the slightest sensation of cinchonism manifest, and that lasting only a moment, in a lady who knew what she had taken and was perhaps quite prepared to feel it.

Finally, I would sum up the conclusions I have adopted, perhaps hastily, though with a certain conviction of their correctness, viz.:

I. That quinia has no inherent property of stimulating the gravid uterus to contraction; being inert as to any effect upon the womb in a quiescent state, and having no decided action in accidental labors at any period of gestation.

II. That to its property as a general stimulant and promotor of vital energy and functional activity, and to that alone, is due its influence upon the uterus in normal parturition; producing then no action peculiar to itself, but merely increasing the power of the uterus to expel its contents by its own natural method, converting what is a defective or even pathological action into a simple physiological process.

III. That by availing ourselves of this power, we may, by administering full doses of sulphate of quinia at the onset of labor, favor the rapid and safe termination of what might otherwise be a tedious and exhausting work.

RETROVERSION OF THE GRAVID UTERUS—RETENTION OF URINE—RECOVERY.

By Dr. Arthur W. Edis.

From Obstetrical Journal of Great Britain and Ireland, June, 1875.

C. G., aged twenty-five; married five years; mother of two children, youngest two years. Last catamenia three months since. Presented herself in the out-patient department on December 19th, complaining of severe pain in the lower abdomen, with swelling, and inability to hold or pass her water, there being also much difficulty in getting the bowels to act, with much bearing-down pain. The patient was unable to lie on either side, and had been unable to do any work for the last three weeks.

About the beginning of December, on attempting to pass water one evening, she found she was unable; but during the night and the following day, "it came so quick she could not stop it." And since then she had been in a constant state of discomfort from the continuous flow of urine. On examination *per vaginam* the pelvis was found to be blocked up by an enlarged retroflexed gravid uterus, at about the third month of utero-gestation. The fundus was low down, pressing on the perineum, and causing a distinct rectocele. The os was hardly to be felt, high up beyond the pubis, above which, externally, a tense, firm, resisting swelling, with indistinct evidence of fluctuation, occupying the centre of the abdomen, and extending up beyond the umbilicus, was detected.

A No. 8 elastic catheter was passed with some difficulty in a vertical direction, and 94 ounces of turbid, ammoniacal urine were drawn off. The patient was then supported in the knee-shoulder position, two fingers of the left hand were passed per

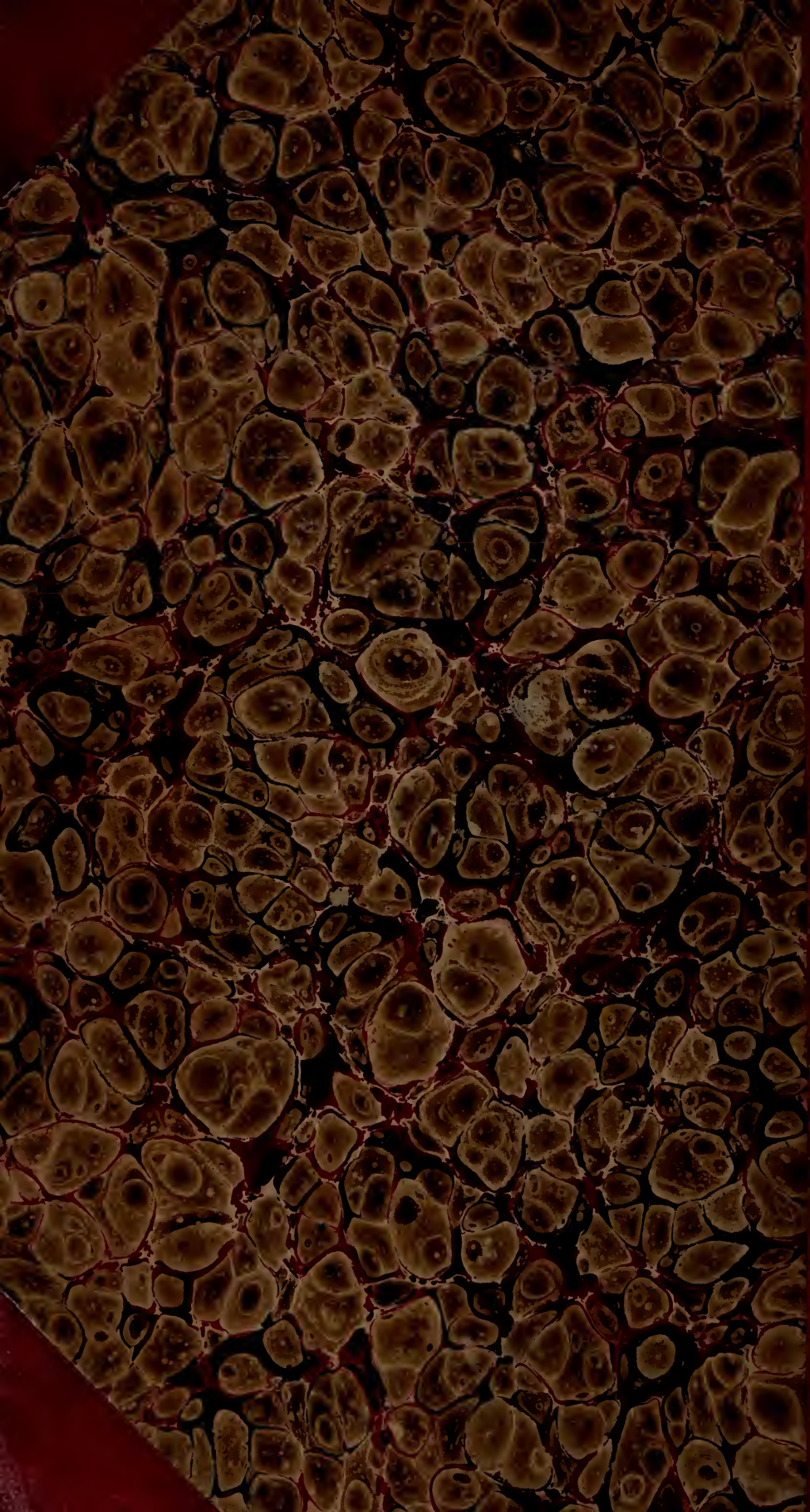
rectum, and the fundus guided round the right side of the promontory of the sacrum, the os descending to the normal position, lowest in the pelvis. A Hodge was inserted, and the patient instructed to relieve the bladder frequently. Ergot, strychnia, and bark were prescribed.

On the 21st she stated that the difficulty in holding her water had returned at 11 P.M. on the 19th, and the urine had run away from her ever since, the Hodge having been forced out the following day. On examination the condition of affairs was the same as when first seen, 86 ounces of turbid urine were drawn off, and the patient lying on the left side, the uterus was replaced as before, and a larger Hodge inserted.

On the 23d she stated that she had had perfect control over the bladder since the last examination. The uterus was now found to be in its normal position, the os being lowest. Twelve ounces of clear, healthy urine were drawn off to see if there were any further retention; the Hodge was *in situ*.

On the 30th she was seen, and was perfectly comfortable, there being no return of the difficulty in micturition. Hodge *in situ*. She has been seen twice since this, and remains convalescent. Pregnancy advancing normally.

TREATMENT OF ABSCESS OF BREAST BY COMPRESSED SPONGE.—A patient had been suffering from mammary abscess for three weeks, but without any special benefit from treatment in checking the discharge of pus. It was decided to try the effect of compressed sponge, and for this purpose a sponge about ten inches in diameter was subjected to pressure and then applied by means of a bandage over the breast. After it had been in use forty-eight hours the abscess was completely cured. No pain was experienced by the patient, and in this case the opening in the breast was three inches above the dependent part of the abscess. In applying a sponge to the breast in this class of cases, it is found of advantage to compress it when dry. After it is applied to the breast and firmly secured in position, a little water is poured upon it to cause expansion and the necessary pressure.—*Ibid.*

CESAREAN SECTION; MOTHER AND CHILD SAVED.—Dr. Valentinotti reports a case of Cesarean section which was successful for the mother and child. The great interest of the case consisted in the use of an India-rubber cord covered with silk, such as is found in commerce, for the sutures. Four points of sutures, passing through the entire thickness of the uterine walls, were used. These threads were cut near the knots, and the remainder abandoned in the abdomen. The abdominal parietes were brought together with ordinary sutures. On the thirty-first day after the operation the patient walked about her room. A second interesting feature of the case was the use of chloral for diminishing the pain of the operation. Ten grammes were given in two doses, with an interval of about half an hour. The patient scarcely knew that the operation was taking place, and at its completion slept profoundly.—*Gazz. Obstet.* and *Giorn. Veneto di Scienz. Med.*, June, 1874.—*Ibid.*

DIAGNOSIS OF OVARIAN DISEASE.—Mr. Spencer Wells called attention, at a recent meeting of the London Pathological Society, to the fact that while extra-ovarian cysts are often radically cured by a single tapping, the cyst contracting and never refilling, true ovarian single cysts are almost certain to fill again. The contents of par-ovarian cysts consisted of little more than pure water.